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ECONOMIC SURVEY
OF
LATIN AMERICA
1951-52

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ECONOMIC SURVEY
OF
LATIN AMERICA
1951-1952

Prepared by the Secretariat of the Economic Commission for Latin America

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New York, 1954

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SYMBOLS EMPLOYED

The following symbols have been used throughout this survey:

.. = Not available
— = Nil or negligible

In a date the use of a slash—e.g., 1949/50—represents a twelve-month period (for example, 1 July 1949 to 30 June 1950). The use of a dash—e.g., 1948-50—represents an average of the calendar years involved (including the two years shown).

References to "dollars" indicate United States dollars.

Differences between totals and percentages are due to rounding.

LETTER OF TRANSMITTAL

Santiago, Chile
November 1953

Sir:

During its second session, the Economic Commission for Latin America, in resolution E/CN.12/150, stipulated that the Executive Secretary should prepare annual basic surveys of the economic situation in Latin America. In accordance with this resolution, I have the honour to transmit to you the fourth *Economic Survey,* covering the period 1951-52, a preliminary edition of which was submitted to the fifth session of the Commission, held in Rio de Janeiro, in April 1953. I now have pleasure in submitting this final version to you. The interval which has elapsed since the first report of this nature was completed, the experience which the Secretariat has gained in this type of research and a better access to sources of information, have all contributed to make the present report more complete than its predecessors.

This *Economic Survey* has certain special characteristics which I take the liberty of drawing to your attention. On this occasion, it was not desired to limit the work to an analysis of recent events in the region's economy, which is the prime motive of these surveys, but to include also a study of trends in Latin America's gross product, referring, at the same time, to the principal factors of its growth. Careful research was essential, the findings of which are described in part I of the present survey. This is the first time that an over-all picture of the Latin-American gross product and its rate of growth together with that of consumption and investment has been presented. It should be recognized in any appraisal of this study that the field of work is in itself difficult and is made more so by familiar deficiencies of statistical material. Besides contributing to knowledge of the economic process in Latin America, it may be hoped that this study will also act as an incentive to improve the available statistical material and its instruments for analysis.

Thus, due to the nature of the task, part I of this survey covers a longer period than the economic events with which this volume is directly concerned, as it was necessary to go back several years in order to obtain a better perspective for the interpretation of recent phenomena. This explains why the research techniques and the form of presentation in part I are different from those used in parts II and III. The new departure, from the Latin-American standpoint, of the analysis in part I calls for a system reviewing the summary of events without abandoning the theoretical and interpretative position. Herein lies the contrast of these pages with the concrete and condensed form of parts II and III; it is equally true for the data on recent economic conditions in Latin America, whether dealing with world events or the regional problems confronting agriculture, industry, mining and energy during 1951-52.

Accept, Sir, the assurances of my highest consideration.

Raúl Prebisch
Executive Secretary
Economic Commission for Latin America

The Hon. Dag Hammarskjold
Secretary-General
United Nations
New York, N. Y.

ECONOMIC SURVEY
OF LATIN AMERICA
1951-52

INTRODUCTION

1. Growth and symptoms of disequilibrium

In comparison with other periods, the growth of the Latin-American economy has been relatively rapid since the post-war era, due largely to a combination of favourable external factors. These, however, have recently deteriorated, and it is therefore not surprising to observe the reappearance of certain tensions in the balance of payments, which the transitory boom resulting from the Korean War had momentarily disguised.

Before this conflict, Latin America was liquidating the sizeable gold and foreign exchange holdings accumulated during the Second World War. Monetary reserves are in any case meant to be used and there would be no reason to underline this fact, were it not symptomatic of the type of disequilibrium characteristic of Latin America's growth. As such, it is of particular importance to some countries which will be studied individually. Considering the region as a whole, however, the proportions of the phenomenon are not disquieting. Indeed, gold and dollar reserves improved during the second half of 1952, after declining since early 1951.

To limit the loss of monetary reserves it again became necessary to establish import restrictions. Apart from this familiar expedient, these symptoms of disequilibrium also redirect attention to the outstanding role which foreign trade plays in Latin-American growth. With experience, more light is being shed upon this problem. Countries which have been subject to continual fluctuations caused by external forces must logically seek to diminish their vulnerability. Generally speaking, therefore, the Latin-American economies are today more stable than previously. In addition, the rate of development must be maintained and even accelerated, and the soundest basis for this process is in foreign trade. Although at one time the aims of Latin-American economic development were assumed to include liberation from the burden of imports, the facts show that this objective is very far from being achieved. While some imports decline, appropriately substituted by domestic output, others increase, sometimes at a comparatively higher rate. This has been particularly true of raw materials, fuel and capital goods. Development, therefore, requires that the structure of imports be altered in accordance with certain basic changes in the domestic economy. These, in turn, must be compatible with the dual purpose of decreasing vulnerability and permitting growth to continue, unhampered by periodic disequilibrium.

Such disequilibrium indicates that readjustments in the composition of imports have neither been effected in the manner nor to the extent required by the growth of the gross geographic product, perhaps owing to the intensity of its expansion. In some cases, however, it reflects a decline in exports.

2. Incentives for exports

It is a proven fact that, in the great industrial centres, the demand for Latin-American foodstuffs and raw materials has developed much less rapidly than their gross product. There are no indications that this situation will change in the future, nor is it logical to anticipate such a change, in view of the characteristic trend of demand. Despite this tendency it should be noted that there have been a good many cases in which a sustained effort to increase exports might yield positive results and certain recent measures were undoubtedly inspired by this conviction.

In these cases, it would not be difficult to establish the specific causes for the decline of exports. At times, it was due to a rise in domestic costs which was not followed by a parallel improvement in the value of the currency abroad. In other instances, the contraction of exports was the result of taxation, price policies, or excessive development of certain export branches to the detriment of productive activities for export purposes. However, there is a common background for these and other factors, namely the instability of foreign markets. A sharp fall in prices, such as that which occurred a short time ago, while retaining some of the benefits from the increase following hostilities in Korea, revives a series of previous vicissitudes which hardly encourage production for export. Although coffee prices are today relatively high, it should not be forgotten that Brazil was once obliged to destroy large surplus stocks of this commodity. For similar reasons, during the war, Argentina accumulated several grain harvests which later had to be used as emergency fuel. In contrast, the prospects on the domestic market are generally more stable, above all, in manufacturing activities. Industry, however, requires certain exports to provide it with essential goods.

3. The capacity for external payments and the pressure of imports

These are the underlying facts which have come to light as a result of the recent disequilibrium. It is well known that maladjustments of this kind have occurred periodically in Latin America, each with its own characteristic features. Usually, the tension in the balance of payments would arise from a contraction in a country's capacity for external payments, subsequent to a period of expansion. Now, disequilibrium occurs even when that capacity remains at a high level. Excluding Argentina, whose statistics reflect very unfavourable harvests, the capacity for external payments totalled some 6,000 million dollars [1] in 1952. This figure is appreciably higher than for preceding years, with the exception of 1951 when, as a result of hostilities in Korea, it reached a total of 6,500 million.

This points to the strong pressure which a growing import demand can exert upon the external deficit. Impelled by economic development itself, and in some cases by inflation, such demand strongly influences the capacity for external payments. The revived use of import restrictions has recently allowed some easing of this pressure. Nonetheless, such restrictions emphasize Latin-American apprehensions, which have persisted throughout the last quarter-century, and may be summarized as a fear that external factors may adversely affect economic progress in these countries.

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[1] These are dollars at 1950 prices, as in all the tables contained in part one of the *Economic Survey* (see the general note at the end of chapter I). In view of the foregoing, Argentina will continue to be excluded in making these comparisons. Total figures for Latin America, including Argentina, are shown in footnote 2, below.

4. THE TERMS OF TRADE AND THEIR EFFECT

Among these external factors, the most outstanding are those affecting the terms of trade. Their impact on Latin-American economy is measured for the first time in this survey. Between 1945 and 1952, while output rose at an annual rate of 4.8 per cent, the gross product increased even more sharply, that is, at a rate of 6.4 per cent, owing to the improvement in the terms of trade after 1945. However, since 1950, these terms became unfavourable. Therefore, while Latin-American output continued to rise at an annual rate of 6.5 per cent in 1952, an expansion of only 3.7 per cent [2] took place in the gross product.

The improvement of the gross product, due to the rising trend of the terms of trade, was clearly reflected in the capacity for external payments. In 1950, for example, the improvement in the terms of trade since 1945 accounted for the equivalent of 67 per cent of the capacity for external payments. This improvement was further accentuated, after the outbreak of hostilities in Korea. By 1952, however, the terms of trade effect had deteriorated, and accounted for the equivalent of only 55 per cent of the capacity for external payments at that date.[3]

This weakening should not obscure the fact that after 1945 Latin America was able to recover, and for the first time even exceed, the level of the terms of foreign trade prevailing prior to the world crisis. Thus, despite a decline of 3 per cent between 1950 and 1952, in the latter year they were 31 per cent above the average for the five-year period 1925-29.

This higher relative level in the terms of trade, in addition to the direct effects, considerably influenced Latin-American investments. The coefficient of investment, that is, as a percentage of the gross product, reached a maximum of 17.7 per cent in 1948, dropping to 16.7 per cent in 1952, as compared with 13.2 per cent for the period 1925-29, just prior to the world economic crisis. From a study of the data contained in the present survey and another report,[4] there can be no doubt that fluctuations in the terms of trade play a very important role in determining the Latin-American coefficient of investment. Any sharp deterioration below the 1952 terms of trade could involve a diminished volume of investment and thereby a lower rate of growth. This would result from a tendency to use available foreign resources for imports of consumer goods, in order to avoid a decline in economic activity, and thus to lower the relative importance of capital goods in total imports.

5. THE PURCHASING POWER OF MONETARY RESERVES

Although monetary reserves must be adequate to meet the first reserves, they could not logically be relied upon in the event of persistent disequilibrium. Moreover, it is necessary to guard against a possible illusion created by inflated values. By the end of 1952, total monetary reserves in Latin America, including gold, dollars and other foreign exchange fluctuated around approximately 3,800 million dollars at current prices.[5] Although considerably lower than the maximum of 4,500 million dollars recorded in December 1946, this figure is still well above the level for the three-year period 1937-39, which preceded the Second World War, when monetary reserves were less than 1,000 million dollars. Such reserves are used principally to cover imports, the value and volume of which are higher today than at that time. If a comparison is drawn between these relative figures, the results will differ appreciably from those obtained when considering only the absolute figures. Indeed, whereas in 1937-39 total monetary reserves in Latin America represented 68 per cent of the value of imports, by the end of 1952 this proportion had declined to 64 per cent, the average for the period 1946-52 being 82 per cent. It should be recalled that countries such as Argentina and Brazil, in addition to using their monetary reserves to relieve the pressure on the balance of payments, also obtained substantial external short-term credits which, if they were included in these calculations, would substantially modify the 1952 ratio.

Not only is the present level comparable with that of the pre-war period as regards the real purchasing power of monetary reserves, but similarly, a substantial proportion of trade is transacted in inconvertible or compensation currency, thus reducing the efficiency of total reserves, since they are not freely convertible.

6. THE ROLE OF FOREIGN INVESTMENT

The co-operation of foreign capital will be essential for an accelerated rate of Latin-American growth without a reduction in present consumption levels. This will be true even if the 1952 terms of trade persist into the future, and of course even more so if there should be a further deterioration. More capital is required than before to yield a given increment to the gross product, since the output-capital ratio is now lower, for a variety of reasons. This is discussed in another report [6]—in a chapter concerning the rate of Latin-American growth—which complements the analysis of the present document. For the present, it is sufficient to indicate that the net amount of foreign capital invested between 1945 and 1952 in Latin America represented only 3 per cent of aggregate investment in this region. Another indication of the small volume of foreign investment was that, during the same period, the net new capital investment was less than total remittances of profits and interest on existing investment; in fact, it was equivalent to only 24 per cent of such transfers.

7. THE DELAY IN BASIC INVESTMENT

There is one sector in which an eventual decline of the investment coefficient in Latin America could be extremely serious, if it is not at least offset by foreign investment.

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[2] The Latin-American figures (including Argentina), referred to in the previous footnote, are as follows: The capacity for external payments in 1952 amounted to 6,655 million dollars, that is, less than the 7,736 millions recorded in 1951 and the 7,110 millions for 1948. The annual rate of expansion of total output was 4.3 per cent and that of the gross product 5.6 per cent between 1945 and 1952, and 3.2 per cent and 1.0 per cent respectively for 1952.

[3] Including Argentina, the effect of the terms of trade was the equivalent of 60 per cent in 1950 and 49 per cent in 1952.

[4] *The Technique of Programming Economic Development*, United Nations Economic Commission for Latin America (E/CN.12/292).

[5] The figures shown in part II (chapter II) comprise gold and dollar reserves only, but the dollar figures include private holdings in the United States.

[6] *The Technique of Programming Economic Development*, United Nations Economic Commission for Latin America (E/CN.12/292).

This involves investments in certain basic service industries and in agriculture. Generally speaking, little capital has been applied to these sectors. Despite the substantial investment growth in the post-war period, enabling these coefficients to be attained, it is well known that transport equipment has not been replaced, nor has it even increased commensurately with economic development. Electric power deficiencies are equally, if not more, serious. In several leading Latin-American countries, electricity consumption has had to be rationed, since investments have either been delayed or were not planned on a sufficiently large scale to keep pace with anticipated increases in power consumption. In some countries, national electrification programmes have been formulated, the majority of which make provision for private enterprise. Elsewhere, no such plans were made, projects are isolated or the necessary studies are only now being completed. Since the generating of electric power in many countries depends upon foreign supplies of fuel, which constitute a heavy burden on the balance of payments, the problem of energy also includes the question of liquid fuels. Latin America is a net exporter of petroleum and total output has been expanding. Nonetheless, certain countries are heavy net importers and must now invest much larger sums than previously in developing their petroleum resources, in order to avoid using substantial amounts of their available foreign exchange for fuel imports.

8. THE RECIPROCAL COMPATIBILITY OF AGRICULTURE AND MANUFACTURING

Agriculture is another critical sector of the Latin-American economy. Its growth has been slow, as compared with manufacturing, creating difficulties both for exports, as indicated above, and for domestic consumption. It should be recalled that there are two main ways by which manufacturing can exert an adverse pressure upon agriculture. Firstly, labour is withdrawn from agriculture, although the necessary resources to compensate for the loss, by introducing mechanization, are not provided, either because the required capital is applied elsewhere, or because preliminary research and technical improvements are not carried out; alternatively both factors occur together. This is the most frequent form encountered. In the second way incentives are offered to agriculture and production is increased, but even so, the per capita product does not rise sufficiently to absorb the increment and simultaneously avoid adverse repercussions upon the price level. Manufacturing plays precisely this dynamic role and were it not to develop, agriculture in turn might not expand, except in a few countries where the growth in the per capita product can still be accelerated by means of agricultural exports. Moreover, it must be recalled that the income-elasticity of the demand for foodstuffs, as the gross product rises, is much lower than that of finished goods and, therefore, manufacturing development must be correspondingly greater.

Consequently, despite past instances of a general disregard for agriculture and the deliberate encouragement to manufacturing—an attitude which is being appreciably changed by the trend of events—there can be no justification for a reversal of policy. If manufacturing activities failed to expand, this in turn would prevent satisfactory development of agriculture for domestic consumption. The problem, therefore, lies in achieving reciprocal compatibility between these activities and in a wise distribution of the scanty monetary reserves available.

9. INFLATION AND INVESTMENT

It is thus necessary to make extraordinary investments, in addition to those required by the current level of economic activity in Latin America. Even if the prevailing terms of trade were to persist, it would be very difficult to effect such investments with domestic resources, at least to an extent that would prevent the 1945-1952 rate of growth in the gross product from being weakened. Not only would present consumption have to be reduced to increase savings, which is not at all easy, but this increment in savings would have to be used to raise the import level of capital goods. The tensions in the balance of payments, referred to early in this introduction, appear to indicate that this possibility could not be carried out to any significant degree, except in a few countries. Under the circumstances, positive effects should not be expected from inflation either. Undoubtedly, by modifying internal distribution of the gross product, inflation could increase savings, although it would do so at a rising social cost. However, for these savings to be transformed into imports of capital goods, there would have to be an idle margin to the capacity for external payments. Broadly speaking, it would appear that this margin had been exhausted in Latin America and, in fact, its limits have been exceeded in some cases. It thus follows that if inflation did provide any incentive for investment when an idle margin to the capacity for external payments existed, there could be no such incentive in the future.

This statement has current significance. The rate of inflation, although it has declined in some countries during 1952, still persists for Latin America as a whole. Hence, little investment stimulus can be expected from it beyond the growing economic and social difficulties inherent in the inflationary process. Paradoxically, these are the principal obstacles which hamper the elimination of the process, while their removal, by means of purely domestic resources, appears difficult.

10. THE SCOPE OF THE PRESENT SURVEY

The objective of the present survey is an analysis of recent events in the Latin-American economy. Nonetheless, it was deemed advisable to include in part one an over-all picture of the general situation, as indicated in the preface, extending the analysis over a period longer than the recent past alone. It was necessary to go back some years in order to obtain a better perspective for the interpretation of events and to analyse their implications in the light of tendencies over a broader period than the present era.

A wide study, prepared in this way, involved the use of other research techniques and a presentation differing from that adopted in the rest of the survey, which refers to more recent events. There is, therefore, a well-defined distinction, in the way of stating the problem, between part one and the remaining chapters, as the reader will realize at once.

In part II of the survey, recent trends in the world economy are examined (1950-52), together with their effect upon the Latin-American situation through its foreign trade, the supply of imports and price fluctuations on the world market. Part II also includes an analysis of the role of foreign investments. Part III consists of a detailed study of the evolution and problems of agriculture, manufacturing, mining, electric power and fuels, for the majority of the Latin-American countries.

Part I

THE GROSS PRODUCT, INVESTMENTS AND CONSUMPTION IN LATIN AMERICA

Chapter I

ANALYSIS OF RECENT TRENDS, 1945-52

1. THE EFFECTS OF THE TERMS OF TRADE ON THE GROSS PRODUCT

The repercussions of a series of favourable factors which had raised Latin America's gross product to more than 40,000 million dollars at 1950 prices [1] were still felt throughout the region in 1952, though with a declining intensity. One of the most important of these factors was the improvement in the terms of trade. Between 1945 and 1952, this improvement involved the appreciable sum of 21,000 million dollars, that is to say, about 8.3 per cent of the aggregate gross product of the area for the whole seven-year period.

As may be seen in another report,[2] fluctuations in the terms of trade have generally exerted a marked effect on capital investment. The past seven years proved no exception to this rule. The influence of other factors, discussed below, was also felt and these combined to raise the rate of investment to 16.5 per cent of the gross product between 1945-52, This rate of investment is unusually high for Latin America, although it is still inadequate to accelerate the rate of development to any marked degree.[3] In fact, this rate has for the first time surpassed the level of 13.2 per cent recorded in 1925-29, the period covering the years of prosperity preceding the world crisis and the ensuing depression. During the five-year period 1929-33, the serious deterioration in the terms of trade, together with other factors of recession, sharply reduced Latin America's gross product, producing consequences which could only be corrected after a period of several years. The most important of these consequences was the decline in the rate of investment to 10.3 per cent of the gross product during the period of intense depression.

These facts have not been invoked merely to provide historical data. Unless this background is sketched in,

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[1] For a complete explanation of the terminology, concepts and methods used in part I, see the general note at the end of chapter I.

[2] *The Technique of Programming Economic Development* (E/CN. 12/292).

[3] This aspect is specifically reviewed in the report, *The Technique of Programming Economic Development, op. cit.*

Table 1. Population, gross product, output, capital and productivity in Latin America, 1945–52
(Dollars at 1950 prices)

Years			*Effect of the terms of trade since 1945*				*Output*	
	Population (millions) (1)	*Gross product (millions of dollars)* (2)	*(millions of dollars)* (3)	*(percentage of gross product)* (4)	*Output (millions of dollars)* (5)	*Capital (millions of dollars)* (6)	*Output-capital ratio* (7)	*Output per worker (dollars)* (8)
			A. Including Argentina					
1945...........	138.1	27,390	–	–	27,390	61,435	0.44	557
1946...........	140.9	30,855	1,879	6.1	28,976	63,305	0.46	575
1947...........	143.9	33,599	2,637	7.8	30,962	66,807	0.46	600
1948...........	147.9	34,601	2,755	8.0	31,846	70,696	0.45	602
1949...........	151.2	35,662	2,406	6.7	33,256	75,329	0.44	614
1950...........	155.3	38,320	4,109	10.7	34,211	79,970	0.43	615
1951...........	158.5	39,653	3,958	10.0	35,695	85,107	0.42	628
1952...........	162.2	40,059	3,235	8.1	36,824	89,995	0.41	635
			B. Excluding Argentina					
1945...........	122.7	20,887	–	–	20,887	44,594	0.47	483
1946...........	125.3	22,953	1,020	4.4	21,932	45,813	0.48	495
1947...........	128.0	24,568	1,651	6.7	22,917	48,299	0.47	505
1948...........	131.6	25,395	1,849	7.3	23,546	50,728	0.46	505
1949...........	134.5	27,219	1,993	7.3	25,226	54,091	0.47	529
1950...........	138.1	29,782	3.759	12.6	26,023	57,510	0.45	532
1951...........	140.9	31,178	3,942	12.6	27,236	61,536	0.44	546
1952...........	144.2	32,347	3.299	10.2	29,049	65,820	0.44	571

Sources and methods

Cols. (1), (2), (3), (5), (6): See general note at the end of chapter I on sources, methods, and concepts.
Col. (3): Based on an index of the terms of trade calculated by the Economic Commission for Latin America.
Col. (4): Col. (3) as a percentage of col. (2).
Col. (5): Col. (2) minus col. (3).
Col. (7): Col. (5) divided by col. (6).
Col. (8): Col. (5) divided by the estimated active population of Latin America.

Plate 1

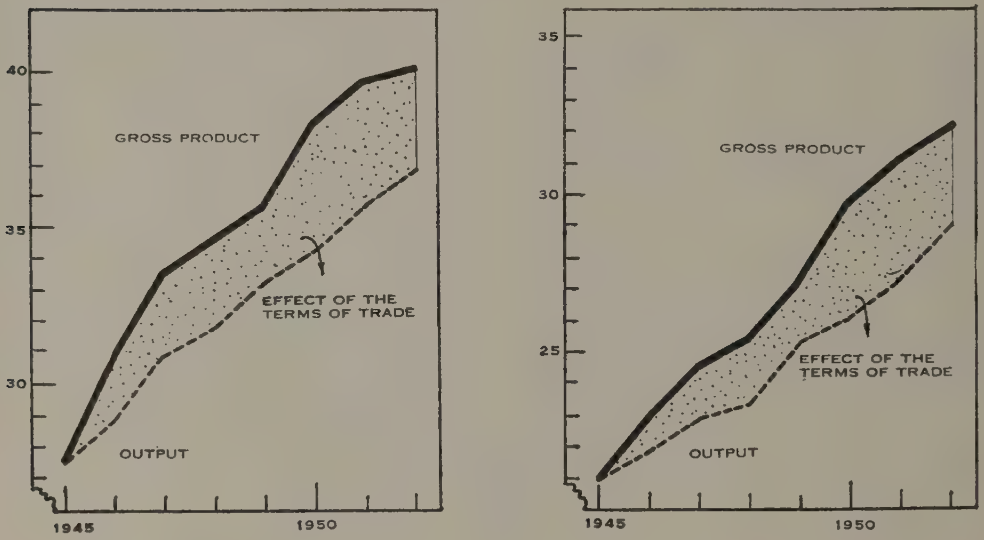
POPULATION, GROSS PRODUCT AND OUTPUT IN LATIN AMERICA, 1945-52

Including Argentina   Excluding Argentina

Gross product, output and the effects of the terms of trade

Thousands of million dollars at 1950 prices

(Natural scale)



Rate of growth of the gross product and of output

Thousands of million dollars at 1950 prices

(Semi-logarithmic scale)

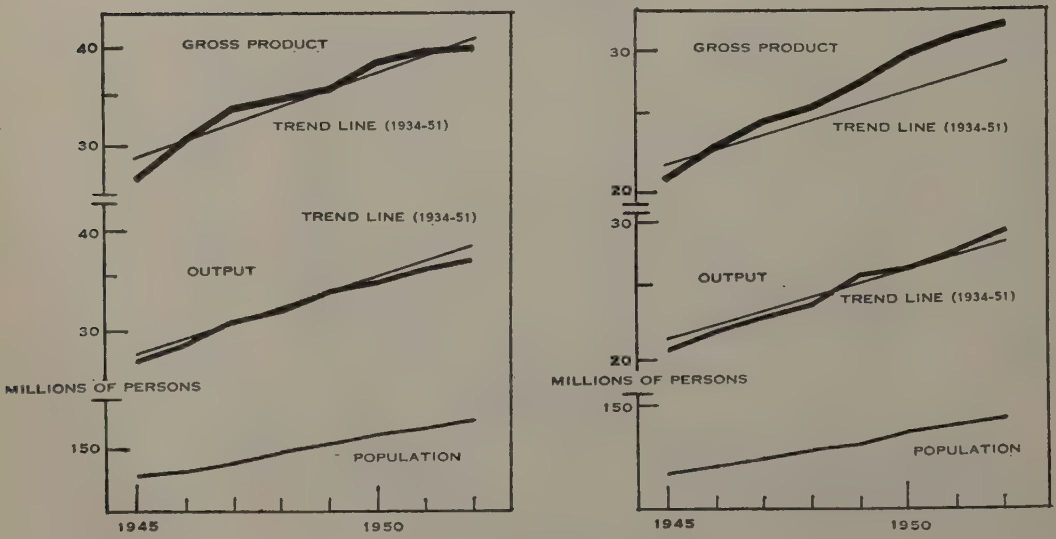


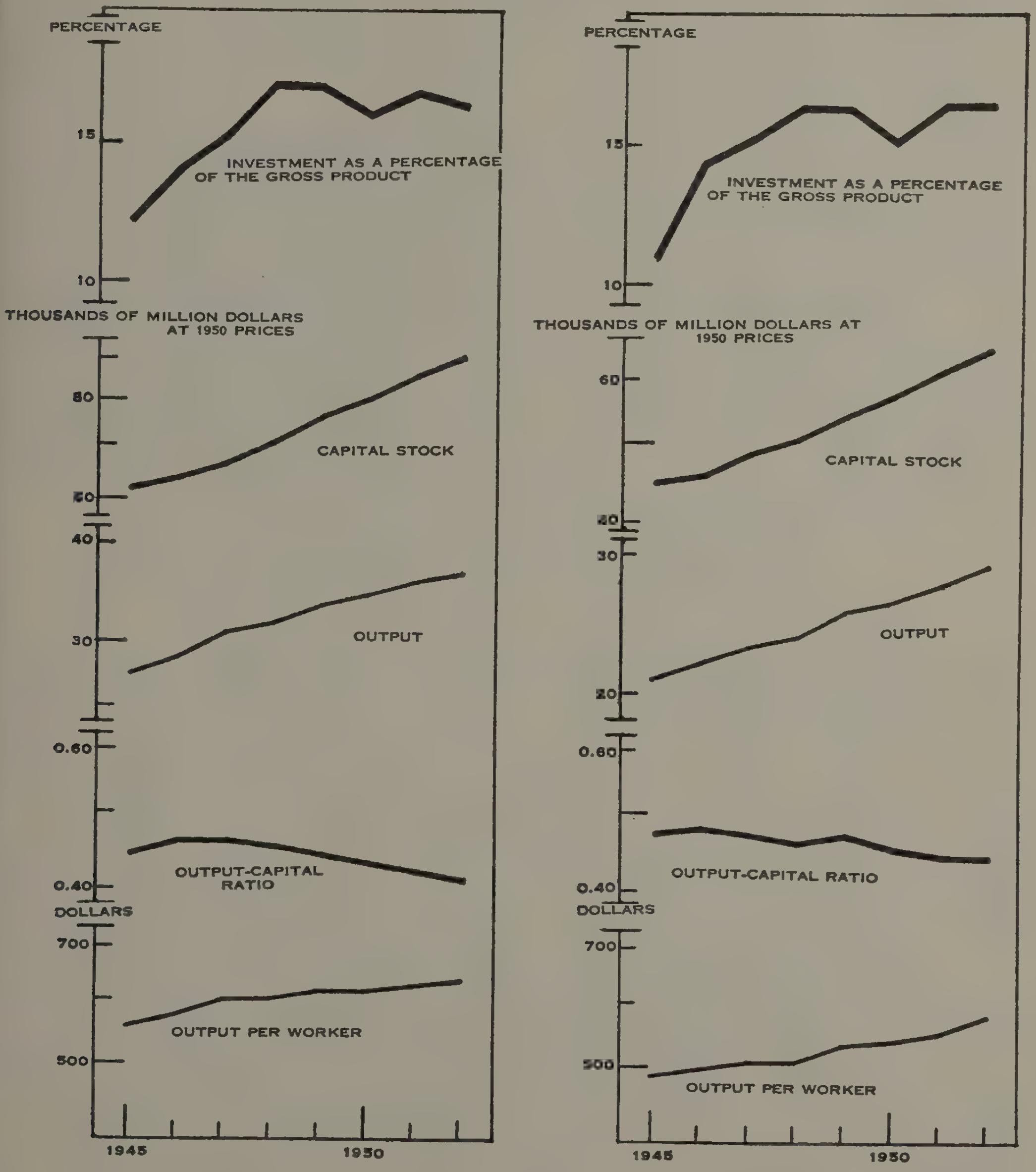
Plate 2

INVESTMENT, CAPITAL STOCK AND PRODUCTIVITY IN LATIN AMERICA, 1945-52

Including Argentina

Excluding Argentina

(Semi-logarithmic scale)



it would be difficult to explain the satisfactory trend of investment in the past seven years. Not until these latter years did the terms of trade approach, and finally surpass, their pre-depression levels. The years 1950 and 1951 were the most favourable from this standpoint, with the terms of trade attaining a record level of 33 per cent above the 1925-29 average. This trend, however, reversed in 1952, when the terms of trade fell slightly to 31 per cent above their pre-crisis level.

There is sufficient reason to believe that most Latin-American countries—especially those which have diversified their production during the past quarter century by establishing manufacturing industries and new branches of agriculture—have simultaneously diminished their vulnerability to international fluctuations. Their domestic economy is generally more stable. The events described above, however, and others to be discussed below, indicate that external factors continue to exercise a considerable influence on investment in Latin America and, through the latter, on the region's rate of economic development.

2. RATE OF GROWTH OF THE GROSS PRODUCT AND OF OUTPUT

The rate of growth of the gross product and of output during the recent past may now be studied. From plates 1 and 2 (tables 1 and 2), it may be seen that the terms of trade affected the gross product in two ways; directly, by increasing that product at an annual rate of 8.3 per cent between 1945 and 1952, and indirectly, by contributing to a higher rate of investment.

The direct effects of the terms of trade reached their maximum intensity in 1950, when they represented 10.7 per cent of the gross product of Latin America. A downward tendency then set in, and in 1952 the favourable effect of the terms of trade accounted for 8.1 per cent of the gross product. Even if the terms of trade maintained their 1952 position during the next few years, their relative importance would continue to diminish if exports grew more slowly than the gross product, as has generally been the case in Latin-American development. Judged by past experience, this tendency would probably prove detrimental to the investment rate, unless deliberate measures were taken to maintain or raise its level and to accelerate development.

Returning again to the main theme, it is evident that the influence of the improvement in the terms of trade on the rate of development can best be portrayed by comparing the trend of the gross product with that of output. The difference between both concepts lies precisely in the effect of the terms of trade, as shown in the two upper charts of plate 1 and in table 1. Whereas, between 1945 and 1952, output expanded at an annual rate of 4.3 per cent in Latin America, the gross product increased at an annual rate of 5.6 per cent. These estimates, however, are affected, during the past few years by the decline of Argentine output, following the remarkable impetus experienced earlier. This country contributes a considerable share of the gross product of Latin America (22.3 per cent in 1950), so that fluctuations in Argentina's gross product exert a considerable influence upon the region

Table 2. Movements of external payments which tend to increase or decrease available goods and services in Latin America, 1945–52

(Millions of dollars at 1950 prices)

A. FACTORS WHICH TEND TO INCREASE AVAILABLE GOODS AND SERVICES

Years	*Inflow of foreign capital*					*Decrease in official monetary reserves*	*Official short-term credit*	*Total*
	Direct, long-term (1)	*Other private long-term (2)*	*Short-term (3)*	*Special official financing (4)*	*Total (5)*	*(6)*	*(7)*	*(8)*
1945..........	261	..	..	72	333	–	..	333
1946..........	254	–	–	102	356	–	–	356
1947..........	476	–	96	130	702	663	71	1,436
1948..........	479	–	–	70	549	560	38	1,147
1949..........	513	–	–	151	664	39	–	703
1950..........	115	–	52	101	268	–	–	268
1951..........	262	129	67	230	688	133	101	922
1952..........	227		41	164	432	364	509	1,305

B. FACTORS WHICH TEND TO DECREASE AVAILABLE GOODS AND SERVICES

Years	*Outflow of foreign capital*					*Remittance of profits and interest*	*Increase in official monetary reserves*	*Decrease in official short-term credits*	*Total*
	Repurchase of foreign-owned capital (9)	*Amortization of official loans (10)*	*Other long-term capital (11)*	*Short-term capital (12)*	*Total (13)*	*(14)*	*(15)*	*(16)*	*(17)*
1945................	3	78	..	..	81	543	860	..	1,484
1946................	276	85	17	214	592	697	34	81	1,404
1947................	164	155	20	–	339	770	–	–	1,109
1948................	683	137	24	9	853	841	–	–	1,694
1949................	50	87	5	89	231	610	–	97	938
1950................	16	165	29	–	210	755	346	50	1,361
1951................	27	115	–	–	142	875	–	–	1,017
1952................	..	106	..	44	150	682	–	–	832

C. NET RESULT

Years	*Factors of increase* (18)	*Factors of decrease* (19)	*Errors and omissions in the total geographic balance of payments* (20)	*The capital account of the geographic balance of payments which covers excess of imports or exports (−)* (21)
1945	333	1,484	−280	−1,431
1946	356	1,404	−296	−1,344
1947	1,436	1,109	−285	42
1948	1,147	1,694	−180	−727
1949	703	938	−84	−319
1950	268	1,361	−164	−1,257
1951	922	1,017	−69	−164
1952	1,305	832	−272	201

Sources and methods

See general note at the end of chpater I on the balance of payments.

1945: Estimated by the Economic Commission for Latin America on the basis of the following sources: *Economic Survey of Latin America, 1948*, United Nations Economic Commission for Latin America; *International Financial Statistics*, International Monetary Fund; publications of the United States Department of Commerce.

1946–50: *Balance of Payments Yearbook*, International Monetary Fund; official publications of Latin-American countries and the United States.

1951: Selected publications of the International Monetary Fund, and unpublished official data.

1952: *International Financial Statistics*, International Monetary Fund; unpublished official data.

For definitions and coverage of the column headings, see *Balance of Payments Yearbook*, International Monetary Fund, volumes 3 and 4.

1945, col. (4): Estimated from data available for Argentina, Brazil, Chile, Colombia, Mexico and Peru.

1945–52, cols. (6) (15): Comprises changes in compensatory official holdings of monetary gold, short-term assets, and use of International Monetary Fund resources.

1945–52, cols. (7) (16): Represents compensatory official loans received or extended, United States Stabilization Fund loans, and other increases in short-term liabilities.

1945–52, col. (10): Includes amortization.

1945, col. (14): Estimated primarily on the basis of remittances to the United States, as tabulated in *International Transactions of the United States during the War Years*, United States Department of Commerce.

1945, col. (15): Estimated from data published in *International Financial Statistics*, excluding Mexico for which data was obtained from *The Economic Development of Mexico and its Capacity to Absorb Foreign Capital*, the Joint Commission of the Government of Mexico and the International Bank for Reconstruction and Development.

1952, cols. (1) (2): Includes outflow of "other long-term capital" not available separately.

1952, cols. (6) (7): The sum of these columns could not be distributed precisely, since available information did not permit an exact allocation between the two separate headings.

as a whole. It was thus felt that in making the analysis contained in this chapter it would also be advisable to consider the region exluding Argentina, in order to eliminate its individual effects.[4] When this is done the rate of growth in Latin America is seen to increase to an annual rate of 4.8 per cent for output and 6.4 per cent for the gross product, between 1945 and 1952.

The rate of growth in the gross product between these years is relatively high in contrast to earlier experience in Latin America. This has even greater significance when it is considered that previous development in this part of the world already compared favourably with that of other regions. This recent intensification in the expansion of the gross product, however, is due exclusively to the favourable trend of the terms of trade. In fact, output has continued to develop at the same high rate observed since the mid-thirties, when the worst difficulties of the crisis had been overcome. The annual rate of growth of 4.8 per cent between 1945 and 1952 is equal to the percentage registered during the period 1935-45, when Argentina is excluded. If that country is included, the effects of declining output during recent years are readily seen in the growth rate of 4.3 per cent between 1945 and 1952.

This disparity between the experience of Argentina and the other countries of Latin America may be clearly seen in the lower charts of plate 1. If the trend line for the period 1934-51 is plotted, it will be observed that both the real gross product and the output of Latin America in 1952 are below the trend line, although after 1946 the gross product had risen well above the trend line. If Argentina is excluded the level of the gross product, in 1952, surpasses the trend line appreciably, as a consequence of more favourable terms of trade. In addition, the level of output in 1952 is also above the trend line.

3. FACTORS DETERMINING THE FLUCTUATIONS IN OUTPUT

The rate of expansion in output was compared with that of the gross product, but the factors influencing these rates have not yet been studied. These factors are (1) the accumulation of capital, and (2) the output-capital ratio. The influence of these factors during the past few years will next be examined, in order to explain the position in 1952. Reference should be made to plate 2 (table 1).

Given the relatively high investment rates indicated above, the rate of capital accumulation was remarkably intense between 1945 and 1952. The annual rate of expansion in the total stock of capital between those years was 5.6 per cent, in comparison with 3.1 per cent for the period 1940-45. One-third of the total capital stock existing in 1952 had been accumulated since 1945. The capital stock per worker in Latin America now averages 1,552 million dollars, in comparison with 1,249 million dollars in 1945, representing an increase of 24.2 per cent.

Output, however, has grown proportionately less than the stock of capital, as may be seen from the lower part of plate 2. Reference will first be made to the figures excluding Argentina, for reasons outlined above. Whereas, during the seven years under review, the annual rate of capital expansion reached the unusual figure of 5.7 per cent, output increased at an annual rate of only 4.8 per cent. The difference may be explained by the fall in the output-capital ratio. Since the acceleration of capital accumulation was accompanied by a reduction in the output-capital ratio, the resulting output curve rose relatively less sharply.

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[4] See general note at the end of chapter I.

There is nothing unusual in this disparity of tendencies. In order to determine the reason for the declining output-capital ratio, it would be necessary to obtain more detailed statistical data than is at present available. Broadly speaking, however, it would appear to result from the opposing tendencies observed since 1945. Difficulties in making new investments during the war led to intensive utilization of capital stock. While this resulted in an improvement of the output-capital ratio, it was only at the cost of considerable damage to equipment. Then came a period of intensive capital accumulation, lowering that ratio. It is evident that investments are not made solely with a view to obtaining an immediate increase in output; they are also aimed at future expansions, particularly in the case of basic investments which cannot be raised gradually but only by large amounts. Thus a margin of idle capacity is deliberately created, which will be employed by slow degrees in the future. This appears to be the phenomenon observed in recent years, though it does not exclude the possible influence of investment in which the output-capital ratio is relatively low, since economic considerations were not borne in mind when such investments were made. In any event, the decline of this ratio nullified the effects of the accelerated rate of capital accumulation, and explains why the 1935-45 rate of expansion in output persisted between 1945 and 1952. Thus, in view of the foregoing, should capital accumulation reveal a strong downward tendency, it would not be surprising if, in subsequent years, the expansion of output were to remain unaffected, or even be increased, as the result of an improvement in the output-capital ratio. The reverse of the phenomenon observed in recent years would occur; in other words, the position would resemble that prevailing during the period 1939-45, when capital rose by only 3 per cent annually while the average increase in output was 4.5 per cent.

If Argentina is included, between 1945 and 1952, capital accumulation rose by 5.6 per cent annually, whereas output increased at an annual rate of 4.3 per cent.

Although the output-capital ratio tended to decline in the period 1945-52, the output per worker rose continuously. This may be seen from the lower part of the plates mentioned above. During the seven years under review, output per worker increased 18.2 per cent, or at an annual rate of 2.4 per cent. This rate is lower than the annual rate of improvement in capital stock per worker, which was 3.3 per cent. This difference is explained, of course, by the decline in the output-capital ratio. When Argentina is included, the output per worker rises at an average annual rate of 1.9 per cent while the capital stock per worker increases at a rate of 3.2 per cent annually.

4. THE GROSS PRODUCT, AVAILABLE GOODS AND SERVICES AND THEIR DISTRIBUTION IN CONSUMPTION AND INVESTMENTS

In the preceding comments, two concepts have been used: (1) the output of goods and services, which depends on the accumulation of capital and the output-capital ratio, and (2) the gross product, reflecting the influence of the terms of trade in addition to fluctuations of output. The gross product, however, does not represent the total volume of available goods and services, for consumption and investment. In fact, a part of the gross product is transferred abroad as remittances of profits and interest accruing from foreign-capital investment, signifying a decrease in the volume of available goods and services within the country. The same results follow from the repurchase of foreign-owned capital by Latin-American countries, from the accumulation of gold and foreign exchange abroad and from the payment of short-term credits previously contracted. In these cases, the volume of available goods and services becomes smaller than the gross product. Conversely, an inflow of foreign capital, a decrease in gold and foreign-exchange reserves and the use of short-term loans, all contribute to a larger volume of available goods and services. The sum of those factors which tend to decrease the volume of such goods and services, and of other factors

Table 3. Exports and imports of goods and services in Latin America, 1945–52

(Millions of dollars at 1950 prices)

Years	*Imports*				*Exports*				*Excess of imports or exports (−)*
	Goods (1)	*Freight and insurance* (2)	*Other services (net)* (3)	*Total* (4)	*Goods* (5)	*Tourist expenditures* (6)	*Freight and insurance* (7)	*Total* (8)	(9)
1945.....	2,410	385	13	2,782	4,063	20	130	4,213	−1,431
1946.....	3,389	547	28	3,964	5,116	34	158	5,308	−1,344
1947.....	5,452	774	78	6,304	5,911	29	322	6,262	42
1948.....	4,981	786	67	5,834	6,158	73	330	6,561	−727
1949.....	4,565	641	139	5,345	5,247	106	311	5,664	−319
1950.....	4,495	630	168	5,293	6,160	100	290	6,550	−1,257
1951.....	5,885	828	171	6,884	6,677	106	265	7,048	−164
1952.....	5,483	766	175	6,424	6,002	101	120	6,223	201

Sources and methods

See general note at the end of chapter I on the balance of payments.
For general sources, see notes to table 2.
Import and export data exclude intra-Latin-American trade. Imports and exports are reported on an f.o.b. basis.
1945–52, cols. (2) (7): Gross payments and receipts.
1945–52, col. (3): Includes private donations.
1945–52, col. (5): Includes net movements of non-monetary gold.
1945, cols. (2) (7): Estimated as 16 per cent of imports for debit entry, and 2 per cent of total trade for credit entry.

Plate 3

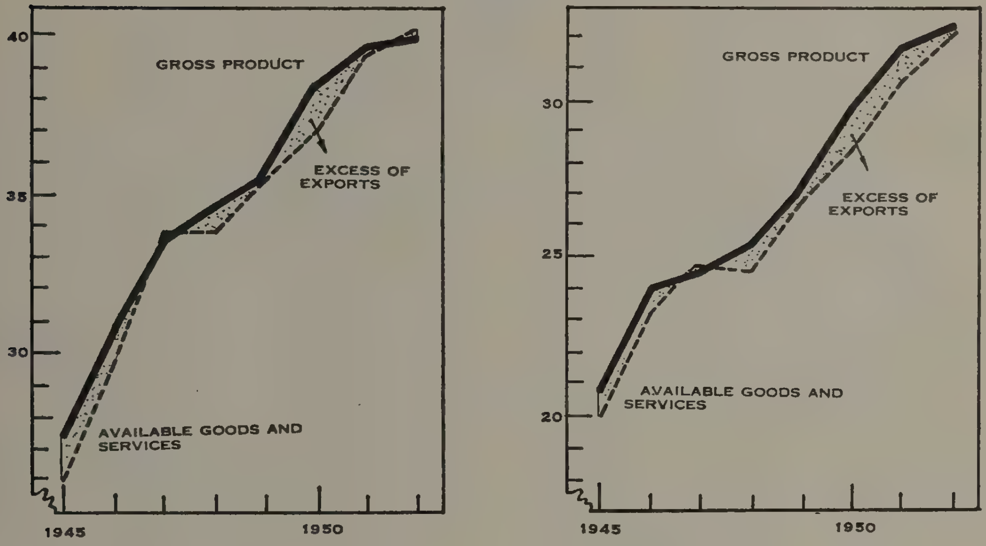
AVAILABLE GOODS AND SERVICES, CONSUMPTION AND INVESTMENT IN LATIN AMERICA, 1945-52

Gross product, available goods and services, and excess of imports or exports

Including Argentina

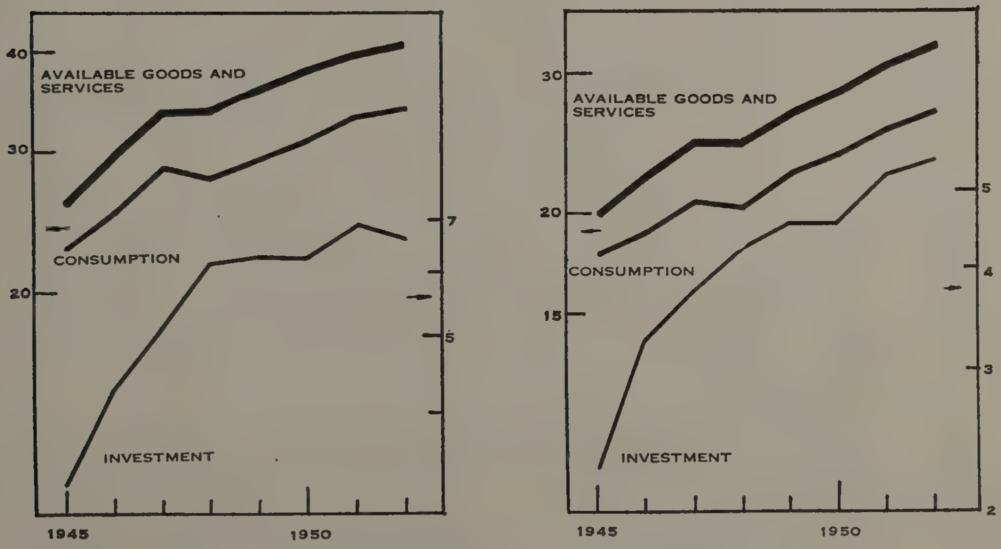
Excluding Argentina

Thousands of million dollars at 1950 prices
(Natural scale)



Available goods and services, consumption and investment

Thousands of million dollars at 1950 prices
(Semi-logarithmic scale)



Economic Commission for Latin America

Table 4. The gross product and available goods and services, for consumption and investment, in Latin America, 1945–52

(Millions of dollars at 1950 prices)

Years	*Including Argentina*			*Excluding Argentina*		
	Gross product (1)	*Excess of imports or exports* (−) (2)	*Available goods and services* (3)	*Gross product* (4)	*Excess of imports or exports* (−) (5)	*Available goods and services* (6)
1945	27,390	−1,431	25,959	20,887	−796	20,091
1946	30,855	−1,344	29,511	22,953	−677	22,276
1947	33,599	42	33,641	24,568	105	24,673
1948	34,601	−727	33,874	25,395	−806	24,589
1949	35,662	−319	35,343	27,219	−446	26,773
1950	38,320	−1,257	37,063	29,782	−1,368	28,414
1951	39,653	−164	39,489	31,178	−402	30,776
1952	40,059	201	40,260	32,347	−53	32,294

Sources and methods

Cols. (1) (4): Table 1, col. (2).
Col. (2): Table 3, col. (8).
Col. (3): Col. (1) plus col. (2).
Col. (5): Table 3, col. (8), less table 23, col. (9) expressed in dollars of 1950 in accordance with criteria expressed in the general note at the end of chapter I.
Col. (6): Col. (4) plus col. (5).

Table 5. Available goods and services, consumption and investment, in Latin America, 1945–52

(Dollars at 1950 prices)

Years	*Total*	*Consumption*	*Investment*	*Ratio to the total*		*Per capita*		
				Consumption	*Investment*	*Available goods and services, total*	*Consumption*	*Investment*
	(millions of dollars)			*(percentage)*		*(dollars)*		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
			A. Including Argentina					
1945	25,959	22,709	3,250	87.5	12.5	188	164	24
1946	29,511	25,221	4,290	85.5	14.5	209	179	30
1947	33,641	28,505	5,136	84.7	15.3	234	198	36
1948	33,874	27,748	6,126	81.9	18.1	229	188	41
1949	35,343	29,065	6,278	82.2	17.8	234	192	42
1950	37,063	30,809	6,254	83.1	16.9	239	198	40
1951	39,489	32,623	6,866	82.6	17.4	249	206	43
1952	40,260	33,573	6,687	83.4	16.6	248	207	41
			B. Excluding Argentina					
1945	20,091	17,825	2,266	88.7	11.3	164	145	18
1946	22,276	19,018	3,258	85.4	14.6	178	152	26
1947	24,673	20,918	3,755	84.8	15.2	193	163	29
1948	24,589	20,336	4,253	82.7	17.3	187	154	32
1949	26,773	22,225	4,548	83.0	17.0	199	165	34
1950	28,414	23,874	4,540	84.0	16.0	206	173	33
1951	30,776	25,497	5,279	82.8	17.2	218	181	37
1952	32,294	26,797	5,497	83.0	17.0	224	186	38

Sources and methods

Col. (1): Table 4, cols. (3) (6).
Col. (2): Col. (1) less col. (3). See general note at the end of chapter I.
Col. (3): For Latin America as a whole, see general note at the end of chapter I and table 19. For Latin America excluding Argentina, investment in Argentina, table 25, col. (3), expressed in dollars of 1950, was subtracted from the estimate of investment in Latin America as a whole.
Col. (4): Col. (2) as a percentage of col. (1).
Col. (5): Col. (3) as a percentage of col. (1).
Col. (6): Col. (1) divided by table 1, col. (1).
Col. (7): Col. (2) divided by table 1, col. (1).
Col. (8): Col. (3) divided by table 1, col. (1).

Table 6. Annual rates of change in available goods and services in Latin America, 1945–52

(Percentages)

Years	Including Argentina			Excluding Argentina		
	Available goods and services	Consumption	Investment	Available goods and services	Consumption	Investment
1945–52	6.5	5.7	10.9	7.0	6.0	13.5
1951	6.5	5.9	9.8	8.3	6.8	16.3
1952	2.0	2.9	−2.6	4.9	5.1	4.1

Sources and methods

Based on table 5.
1945–52: Cumulative percentage rate of change.

which tend to increase it, is equivalent to the difference between the gross product and available goods and services, for consumption and investment, within the country. Table 2 shows these main factors in detail, and comprises the capital account of the geographic balance of payments.

Remittances of profits and interest might rise, not only from an increase in foreign investments, but also because of higher rates of return. The inflow of foreign capital has by no means been small, but it has never exceeded the transfer of profits and interest. In 1945-52, remittances amounted to 5,773 million dollars, whereas the inflow of capital was 3,992 million dollars. Furthermore, repurchases of foreign-owned capital and other capital outflows totalled 2,598 million dollars and, therefore, the net inflow was only 1,394 million dollars. As a result, remittances of profits and interest exceeded new net foreign investment by 4,379 million dollars. In order to cover this deficit, Latin America as a whole has in general been compelled to export more than it imports, as may be seen from table 3.

The effects of these factors are shown in the upper portion of plate 3 (table 4). It should be noted that available goods and services are generally smaller than the gross product, due to the chronic excess of exports which reduces total goods and services available for domestic consumption. Exceptions occurred on only two occasions, one being the year 1952. In this instance, the excess of imports resulted principally from Argentina's intensive use of monetary reserves and foreign credits to counteract the consequences of abnormally low exports. Brazil also contributed to the import surplus, although on a smaller scale.

The lower part of plate 3 (table 5) shows the distribution of available goods and services between consumption and investment. As may be seen, consumption is much more stable than investment, judging from the respective curves. Whereas the former rises almost uniformly, with relatively slight fluctuations in its rates of expansion, investment varies much more sharply. Furthermore, fluctuations in consumption would probably be even less if inventory adjustments, from one year to another, could be eliminated. These were necessarily included in consumption figures, however, owing to inadequate statistical information.

The pertinent figures (shown in table 6) may now be examined. Between 1945 and 1952, consumption expanded at the annual rate of 5.7 per cent. This increases slightly to 6 per cent if Argentina is excluded. Investment rose considerably more, the annual rate of expansion being 10.9 per cent between 1945 and 1952, reaching 13.5 per cent, if Argentina is excluded. These figures were affected in 1952 by unfavourable external factors. The resulting contraction, however, was too slight to prevent investment from maintaining its previous high levels.

5. Growth of the gross product and per capita consumption

The analysis thus far has been based upon a separate examination of each main aspect of the problem. It would now be appropriate to summarize briefly the impact of those factors which affect per capita consumption levels, since expansion of the latter is the basic objective of economic development. Accordingly, table 7 shows the annual per capita rates of growth for the period 1945-52, which were previously given in aggregate figures.

A very important fact may be observed in this table. Whereas per capita output expanded by 2.4 per cent annually, available goods and services rose at the much more rapid rate of 4.6 per cent. This is, in fact, exceptionally high even in comparison with other parts of the world.

How could this expansion in consumption take place despite the limitations of output? It may seem that only a little less than two-thirds of the increase was provided by output. The remainder resulted from improved terms of trade and a reduction in the excess of exports which Latin America generally requires to cover its remittances abroad, when other geographic balance of payments items cannot offset the pressure of such remittances.

As indicated, the effect of the terms of trade is given by the difference between output and the gross product. The former, as has been shown, increased at an annual per capita rate of 2.4 per cent, whereas that of the gross product was 4 per cent. This, then, is the figure for the effect of the terms of trade.

The second factor, namely, the lower surplus of exports, enabled the 4 per cent rate of expansion of the gross

Table 7. Annual rates of per capita growth in Latin America, 1945–52

(Percentages)

	Including Argentina	Excluding Argentina
Output	2.0	2.4
Gross product	3.2	4.0
Available goods and services	4.0	4.6
Consumption	3.4	3.6
Investment	8.0	11.3

Sources and methods

Cumulative percentage rate of change. Based on tables 1 and 4.

product to reach a level of 4.6 per cent per capita for available goods and services.

Consequently, between 1945 and 1952, the influence of external factors was indeed remarkable. Had these not existed, it would have been impossible for consumption to expand at the rate of 3.6 per cent while output increased only 2.4 per cent, without proving detrimental to investment. On the contrary, investment rose substantially, attaining an annual per capita rate of increase of 11.3 per cent over this period.

The inclusion of Argentina alters the magnitude of the per capita rates of growth but not the nature of the phenomenon described. In fact, the contrast between output and consumption is much sharper. Thus the annual growth rate for output was only 2 per cent between 1945 and 1952, owing to the influence of adverse factors which affected the level of Argentine output. But consumption grew at 3.4 per cent or at a rate similar to the above figure excluding Argentina. Investments, however, expanded less intensively, their per capita rate of increase being 8.0 per cent.

The explanation also stems partly from the growth of available goods and services, which rose at a rate higher than that of output. This may be seen from the figures contained in table 7.

This summary thus provides an adequate basis for studying the problems of Latin-American development during the coming years. The remarkable per capita rate of increase for available goods and services was largely due to factors which seem unlikely to persist in the immediate future. The terms of trade appear more likely to deteriorate, and at present there is little prospect of their rising to the same degree as between 1945 and 1949. Even if the terms of trade stabilize at their present level, they will not induce new additions to the gross product and for this reason alone the rate of growth would logically tend to be weakened. As regards the export surplus, there appears little possibility—at least for the moment—that the same factors which caused a reduction in the export surplus between 1945 and 1952 will continue to persist. It should be recalled that these factors consist of the repurchase of foreign-owned capital and the intensive use both of monetary reserves and short-term capital credits.

Table 8. Total capacity for external payments, capacity to import and imports in Latin America, 1945–52

(Millions of dollars at 1950 prices)

A. TOTAL CAPACITY

Years	*Exports* (1)	*Inflow of foreign capital* (2)	*Total capacity for external payments* (3)	*Effect of the terms of trade since 1945* (4)	*Effect of the terms of trade, as percentage of total capacity* (5)
1945	4,213	333	4,546	–	–
1946	5,308	356	5,664	1,879	33.2
1947	6,262	702	6,964	2,637	37.9
1948	6,561	549	7,110	2,755	38.8
1949	5,664	664	6,328	2,406	38.0
1950	6,550	268	6,818	4,109	60.3
1951	7,048	688	7,736	3,958	51.2
1952	6,223	432	6,655	3,235	48.6

B. CAPACITY TO IMPORT

Years	*Total capacity for external payments* (6)	*Remittance of profits and interest* (7)	*Repurchase of foreign-owned capital* (8)	*Capacity to import*		*Imports of goods and services* (11)
				Absolute figures (9)	*Percentage of total capacity* (10)	
1945	4,546	543	3	4,000	88.0	2,782
1946	5,664	697	276	4,691	82.8	3,964
1947	6,964	770	164	6,030	86.6	6,304
1948	7,110	841	683	5,586	78.6	5,834
1949	6,328	610	50	5,668	89.6	5,345
1950	6,818	755	16	6,047	88.7	5,293
1951	7,736	875	27	6,834	88.3	6,884
1952	6,655	682	..	5,973	89.8	6,424

Sources and methods

Col. (1): Table 3, col. (8).
Col. (2): Table 2, col. (5).
Col. (3): Col. (1) plus col. (2).
Col. (4): Table 1, col. (3).
Col. (5): Col. (4) as a percentage of col. (3).
Col. (6): Col. (3).
Col. (7): Table 2, col. (14).
Col. (8): Table 2, col. (9).
Col. (9): Col. (6) less cols. (7 + 8).
Col. (10): Col. (9) as a percentage of col. (6).
Col. (11): Table 3, col. (4).

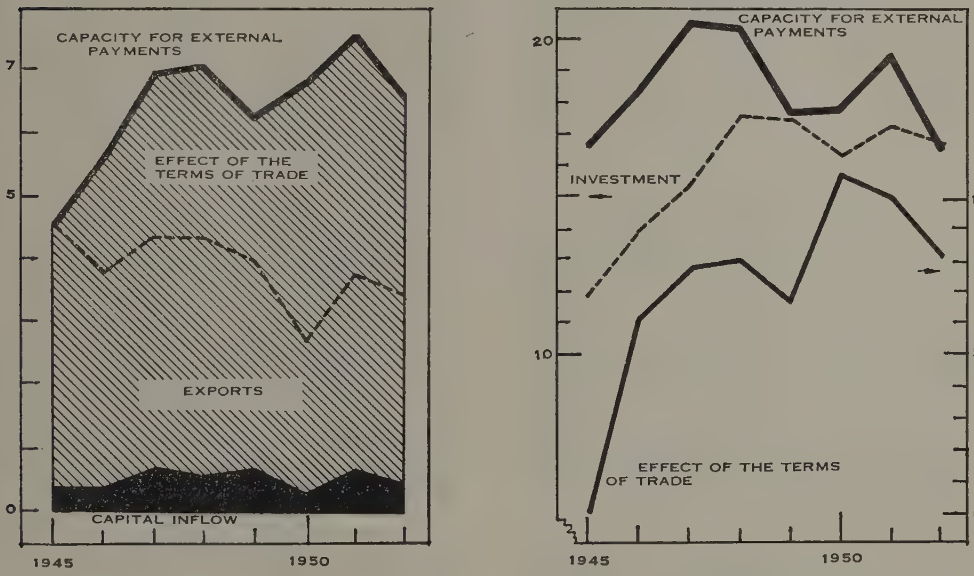
Plate 4

CAPACITY FOR EXTERNAL PAYMENTS AND CAPACITY TO IMPORT, AND THEIR INFLUENCE ON INVESTMENT AND IMPORTS IN LATIN AMERICA, 1945-52

(Natural scale)

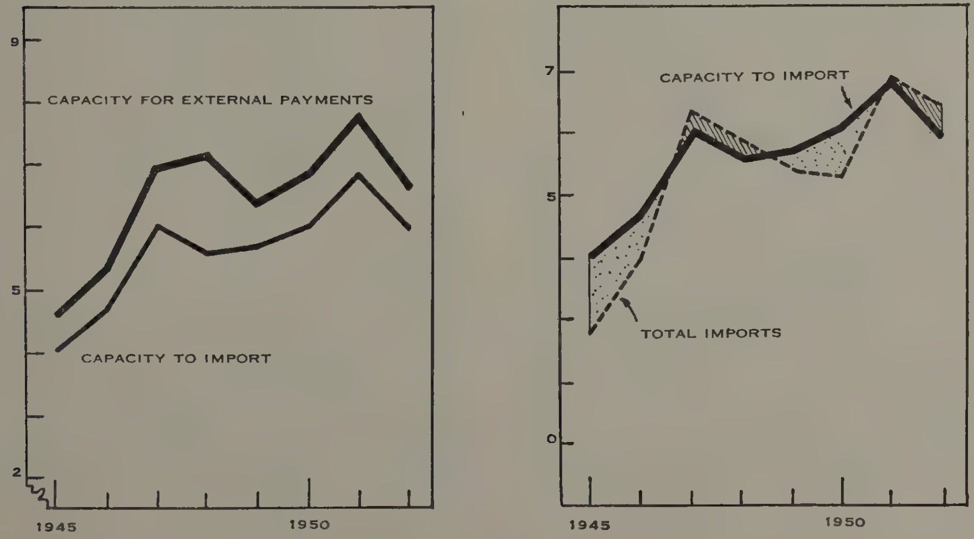
Thousands of million dollars at 1950 prices

As a percentage of the gross product



Thousands of million dollars at 1950 prices

Thousands of million dollars at 1950 prices



Therefore, the maintenance of the 1945-52 per capita rate of development during the next few years depends on Latin America's ability both to intensify its own rate of investment and to obtain the required volume of supplementary foreign capital. It also depends on raising the output-capital ratio, firstly, by prudent funnelling of savings into higher productivity investments and secondly, by measures which result in a more efficient use of existing capital stock.

There is no need to emphasize the primary importance of these factors. Although average per capita consumption throughout Latin America expanded at the rate indicated above, it nonetheless totalled only 207 dollars in 1952, a very low figure in comparison with other regions of the world. If it is to be raised in the not too distant future, therefore, the rate of economic growth must be considerably accelerated.

6. THE CAPACITY FOR EXTERNAL PAYMENTS AND INVESTMENTS

The contrast between the relative stability in the expansion of consumption and the acute susceptibility of investment has already been reviewed. This vulnerability is largely a consequence of the repercussions of external factors on the volume of available goods and services. Another report[5] explains the manner in which investment is affected by the fluctuations of the gross product induced by these factors. In fact, they exercise a dual influence. Firstly, they cause investment to vary directly, raising or lowering the margin of savings; secondly, they create the necessary capacity to import not only capital goods required for investment, but also the additional raw materials and fuels needed for the greater capacity resulting from such investment.

This vital influence of external factors is reflected in the capacity for external payments. Plate 4 (tables 8 and 9) shows both the fluctuations of the capacity for external payment and its influence on investment and imports. In considering the former, attention should be drawn to the sharp expansion of this capacity since 1945. In that year it amounted to only 4,546 million dollars and rose to 6,655 millions in 1952, after reaching a peak in the preceding year. This upward movement was largely the result of a strengthening of the terms of trade. In these seven years, as noted earlier, the improvement amounted to a total of 20,979 million dollars, far exceeding the increase in exports of 14,120 million dollars.

Table 9. The ratio of the capacity for external payments and investment to the gross product in Latin America, 1945–52

Years	*Capacity for external payment*	*Investment*	*Capacity for external payment*	*Investment*
	Absolute figures (millions of dollars at 1950 prices)		*(as a percentage of the gross product)*	
	(1)	(2)	(3)	(4)
1945	4,546	3,250	16.6	11.9
1946	5,664	4,290	18.4	13.9
1947	6,964	5,136	20.7	15.3
1948	7,110	6,126	20.5	17.7
1949	6,328	6,278	17.7	17.6
1950	6,818	6,254	17.8	16.3
1951	7,736	6,866	19.5	17.3
1952	6,655	6,687	16.6	16.7

Sources and methods

Col. (1): Table 8, col. (3).
Col. (2): Table 5, col. (3).
Col. (3): Col. (1) as a percentage of table 1, col. (2).
Col. (4): Col. (2) as a percentage of table 1, col. (2).

The influence exercised on investments by fluctuations in the capacity for external payments may now be examined. For this purpose, both movements are presented as percentages of the gross product in the second top chart of plate 4. The relationship between both rates is evident. The sharp upward trend of the rate of investment, rising from 11.9 per cent in 1945 to 17.7 per cent in 1948, was preceded by an increase in the rate of the capacity for external payment, which moved from 16.6 per cent, in 1945, to 20.7 per cent, in 1947. In 1948, the rate of the capacity for external payments dropped slightly. However, the effects of this decline on the rate of investment were somewhat delayed and the latter did not decrease until 1949, reaching a minimum in 1950, one year after the weakening in the rate of the capacity for external payments. This delay is natural, since the fluctuations of the gross product, brought about by external factors, require some time before affecting investment plans, in addition to the time needed for carrying out investment programmes. This also explains why the 1950 and 1951 improvements in the rate of the capacity for external payments did not affect investment until 1951. In contrast, the decline in the rate of the capacity for external payments, in 1952, coincided with a corresponding downward trend of the rate of investment. Despite this recent contraction, the investment rate was 16.7 per cent of the gross product, and that of the capacity for external payments was 16.6 per cent in 1952. These figures, however, are lower than the maxima reached previously.

The above analysis clearly indicates the preponderant influence exercised on Latin-American investment as a whole by fluctuations of the capacity for external payments. Attention has already been drawn to the importance of the fluctuations of the terms of trade in relation to the trend of the capacity for external payments. It is therefore not surprising that the curve showing the effects of the terms of trade on the gross product (the end of plate 4) should follow the same direction as the rate of investment. Their correlation, however, is not as close as in the preceding case, since the fluctuations of exports, measured in constant prices, and to a lesser extent the inflow of capital, also influence the capacity for external payments and consequently investment.

Nevertheless, the terms of trade appear to have contributed much more forcefully than exports (at constant prices) to the persistence of the relatively high investment rate. Thus, with respect to 1945, the favourable terms of trade provided an increment of 8 per cent to the 1952 gross product. Exports, measured in constant prices, provided an increment of only 0.1 per cent between the same years.[6] The figure of 8 per cent, which represents the effect of the terms of trade on the gross product, is responsible for most of the 4.8 per cent increase in the investment rate (relative to the gross product) experienced in the period indicated above.

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[5] *The Technique of Programming Economic Development* (E/CN. 12/292).

[6] The percentage of the quantum of exports in relation to the gross product rose from 15.4 per cent in 1945 to 15.5 per cent in 1952.

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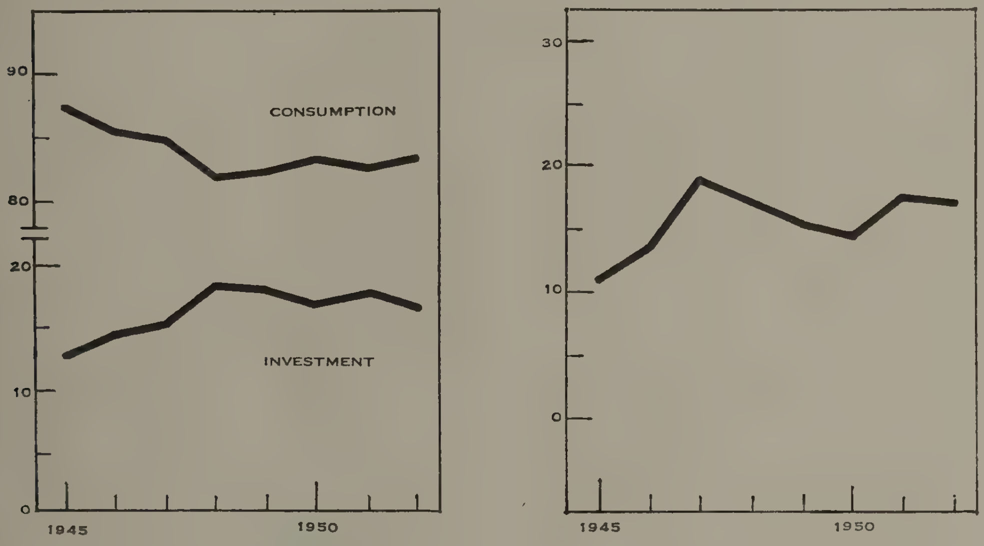
Plate 5

RELATIONSHIP BETWEEN AVAILABLE GOODS AND SERVICES, CONSUMPTION AND INVESTMENT, AND IMPORTS, IN LATIN AMERICA, 1945-52

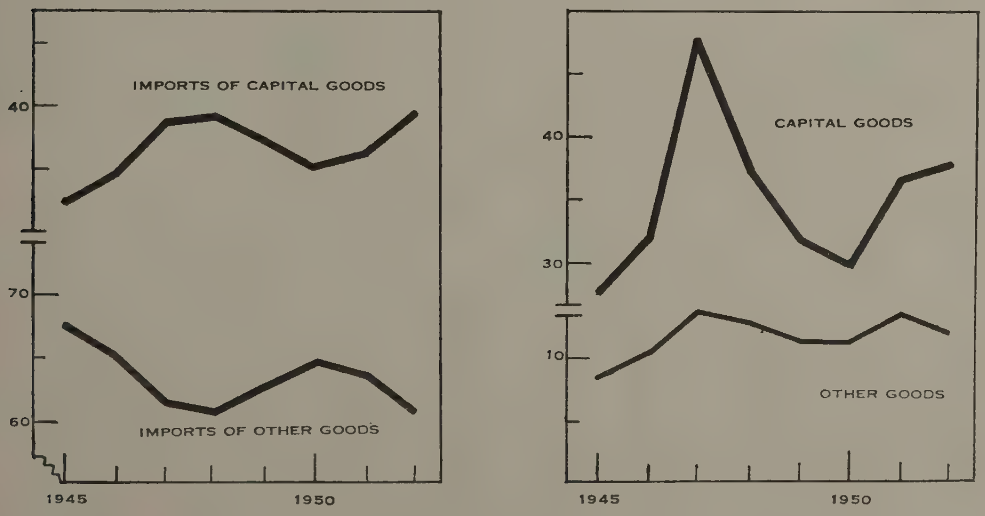
Consumption and investment as a percentage of available goods and services

Imports as a percentage of available goods and services



Ratio of imports of capital goods and other goods to total imports

Imports of capital goods and other goods as a percentage of investment and consumption, respectively



The importance of probable trends in the capacity for external payments, in relation to the rate of Latin-America's economic growth, in both the immediate and the more distant future, can thus be understood. But it should be recalled that while the terms of trade are of considerable importance, as has been seen, the quantum of exports is the other determining factor. Further, the inflow of foreign capital may achieve greater importance than the weak influence it has exercised so far. Nevertheless, exports must expand and satisfactory terms of trade must be obtained, so that the remittances due on foreign capital can readily be met.

7. THE CAPACITY TO IMPORT AND IMPORTS

Turning now to the capacity to import, it should be noted that this is calculated by subtracting remittances of profits, interest and funds used for repurchases of foreign-owned capital from the capacity for external payments. Estimates show that, in 1952, the capacity to import was equivalent to 89.8 per cent of the capacity for external payments, that is, slightly higher than the figure of 88.0 per cent recorded in 1945, although it had fluctuated slightly during the full period. This explains why the corresponding curves on chart 3 of plate 4 remain fairly close to one another.

Imports generally tend to follow the trend of the capacity to import, though this relationship is not infallible. From chart 4 of the same plate it may be seen that imports occasionally are lower than the capacity to import; the difference is covered by an accumulation of monetary reserves or repayment of short-term credits contracted earlier by the monetary authorities. At other times, the opposite occurs, as was the case in 1951 and 1952, when imports exceeded the capacity to import, requiring the use of previously accumulated reserves and short-term external credits.

The distribution of imports between capital goods and other types of goods, as well as its connexion with the composition of available goods and services, may now be considered. Plate 5 (tables 10 and 11) was prepared for this purpose. The first chart shows that the ratio of investment to available goods and services was still higher in 1952 than at the beginning of the period 1945-52, despite its relative deterioration in the past few years. This might lead to the conclusion that the proportion of imports of capital goods to total imports had likewise increased. A glance at chart 3 of plate 5 indicates that the reverse occurred. Other goods, directly or indirectly intended for the consumer market, comprise an increasing share of imports of goods and services.

This upward trend in consumer goods imports, during a period marked by an intense rate of investment, is very striking. But it is one of the characteristic phenomena of economic development in Latin America. The introduction of new industries and the expansion of existing enterprises, while tending to reduce certain imports has nevertheless increased others, particularly raw materials and fuel. Moreover, the growth in the per capita product simultaneously caused an increase in a number of different categories of finished consumer goods.

The impact of these imports is reflected in the upward trend of their ratio to total consumption. Indeed, the percentage of consumer goods to total consumption increased considerably during the period under review, rising from 8.2 per cent in 1945 to 11.7 per cent in 1952, as may be seen from chart 4 of plate 5.

The pressure did not increase to the same extent on imports of capital goods, which partly explains the decline in their proportion to total imports, as shown above. Undoubtedly, the rate of imports of these goods, as compared with that of the investment to which they were applied, is relatively higher in Latin America since, for the most part, the industries producing capital goods are still in an early stage of development. As a consequence, the rate of imports of capital goods, as a percentage of investment, rose at a lower rate than that of consumer goods, accounting for 37.8 per cent of total investment in 1952, as compared with 27.5 per cent in 1945. The rates for some intervening years were considerably greater, as may be seen from the corresponding curve.

The increase of both these rates, which are combined in the total rate for imports with respect to available goods and services shown in chart 3, is becoming a serious deterrent to the acceleration of Latin America's rate of growth, although it has not affected individual countries to the same degree. The rates of the capacity to import and of the capacity for external payments to the gross product continue to be more satisfactory than at the beginning of the period, as was shown above. The simultaneous improvement of the rate of imports, relative to the gross product, however, is again exercising strong pressure on the capacity for external payments.

Table 10. Composition of imports in Latin America, 1945–52

Years	*Total imports (millions of dollars of 1950)*	*Consumer goods*	*Raw materials*	*Fuels*	*Capital goods*	*Consumer goods*	*Raw materials*	*Fuels*	*Capital goods*
		(millions of dollars of 1950)				*(as a percentage of total imports)*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1945.....	2,782	1,143	576	170	893	41.1	20.7	6.1	32.1
1946.....	3,964	1,526	717	345	1,376	38.5	18.1	8.7	34.7
1947.....	6,304	2,389	996	479	2,440	37.9	15.8	7.6	38.7
1948.....	5,834	2,030	974	543	2,287	34.8	16.7	9.3	39.2
1949.....	5,345	1,849	989	508	1,999	34.6	18.5	9.5	37.4
1950.....	5,293	2,005	947	471	1,868	37.9	17.9	8.9	35.3
1951.....	6,884	2,554	1,232	606	2,492	37.1	17.9	8.8	36.2
1952.....	6,424	2,306	931	662	2,525	35.9	14.5	10.3	39.3

Sources and methods

Col. (1): Table 3, col. (4).

Cols. (2) (3) (4) (5): Col. (1) multiplied by cols. (6) (7) (8) and (9), respectively.

Cols. (6) (7) (8) (9): Based on a tabulation of the quantum of imports in 1948 prices made by the United Nations Economic Commission for Latin America.

Plate 6

GROSS PRODUCT, OUTPUT AND THE EFFECT OF THE TERMS OF TRADE, BY ACTIVITIES, IN LATIN AMERICA, 1945-52

Including Argentina Excluding Argentina

Thousands of million dollars at 1950 prices
(Natural scale)

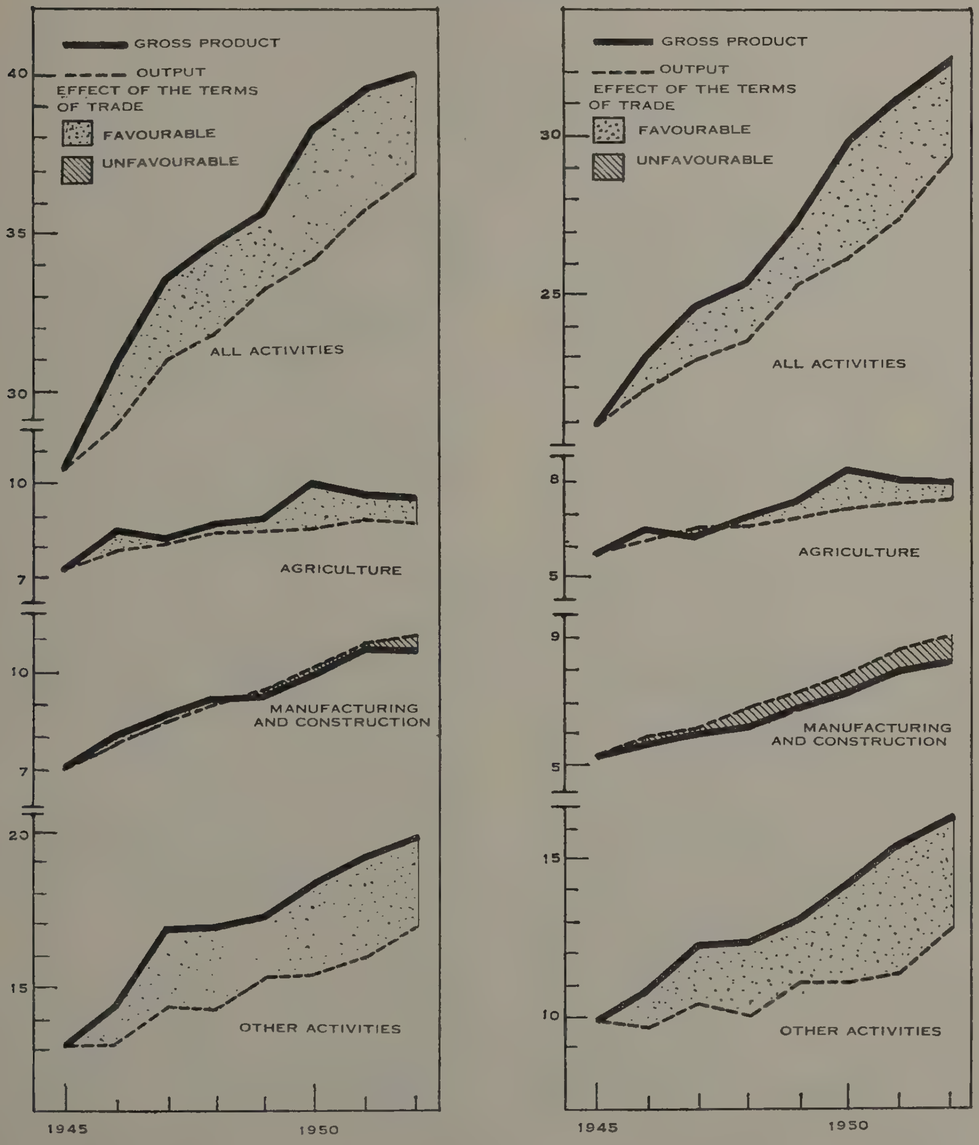


Plate 7

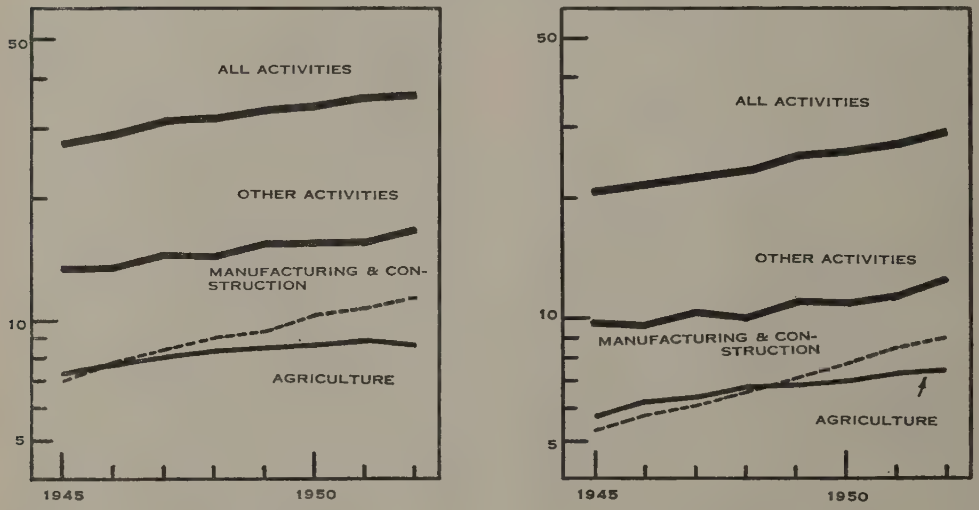
OUTPUT AND INDICES OF RELATIVE PRICES BY ACTIVITIES, IN LATIN AMERICA, 1945-52

Including Argentina Excluding Argentina

Output

Thousands of million dollars at 1950 prices.

(Semi-logarithmic scale)



Indices of relative prices

1945 = 100

(Natural scale)

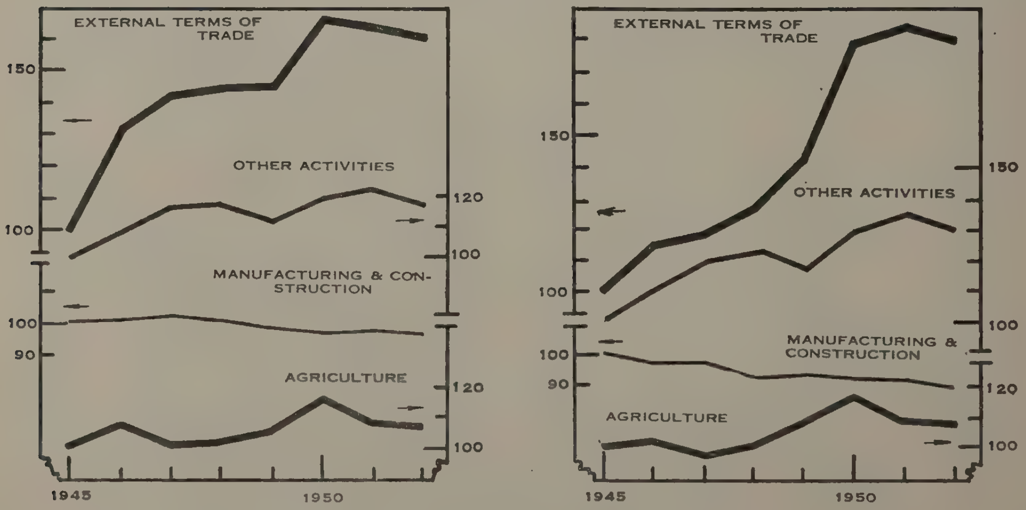


Table 11. Relative importance of the components of imports with respect to available goods and services in Latin America, 1945–52

Years	*Capital goods as a percentage of investment* (1)	*Consumer goods* (2)	*Raw materials* (3)	*Fuels* (4)	*Total imports as a percentage of available goods and services* (5)
		As a percentage of consumption			
1945	27.5	5.0	2.5	0.7	10.7
1946	32.1	6.0	2.8	1.4	13.4
1947	47.5	8.4	3.5	1.7	18.7
1948	37.3	7.3	3.5	2.0	17.2
1949	31.8	6.4	3.4	1.7	15.1
1950	29.9	6.5	3.1	1.5	14.3
1951	36.3	7.8	3.8	1.8	17.4
1952	37.8	6.9	2.8	2.0	16.0

Sources and methods

Col. (1): Table 10, col. (5) as a percentage of table 5, col. (3).
Cols. (2) (3) (4): Table 10, cols. (2) (3) and (4), respectively, as percentages of table 5, col. (2).
Col. (5): Table 10, col. (1) as a percentage of table 5, col. (1).

This is by no means a new phenomenon in Latin America. In fact, it has made its appearance periodically in the development of the region, as has been indicated in earlier ECLA reports; its impact, however, is perhaps sharper owing to the trend of events themselves. This pressure has always implied the need for intensified substitution of imports by means of domestic production, in order to restore equilibrium. This process has been clearly visible in the more economically developed Latin-American countries. Although there is still an ample margin for substitution in other countries of the region, which have not progressed as far in their structural changes, it would appear that the more advanced countries are entering upon a new phase. Simpler substitutions have already been achieved for products where raw materials were readily available, had a relatively large market and for which no very substantial investment per worker was required. In the second phase, these conditions may prove to be less favourable.

This new phase of substitutions undoubtedly calls for a high level of investment, which may be limited precisely by the capacity for external payments. This problem will be discussed in another report and, for the present, let it suffice to indicate that a vicious circle exists. In order to attenuate the pressure on the capacity for external payments, it is necessary to proceed with the substitution of imports, and that substitution, at least temporarily, requires a greater capacity for external payments. Hence, the future rate of Latin America's growth depends on three fundamental elements, apart from the precision and perfect balance of development programmes, namely, the possibility and the will to increase exports, the terms of trade and the inflow of foreign capital.

8. THE FLUCTUATIONS OF THE GROSS PRODUCT, OUTPUT AND RELATIVE PRICES, BY ACTIVITIES

During the past few years, the outstanding feature in the development of the different sectors of Latin America's economic activity was the remarkable expansion of manufacturing. Output reached a total of 11,174 million dollars in 1952, or 27.4 per cent above the 8,768 million dollars obtained from agriculture. This difference between manufacturing and agricultural output is a relatively new phenomenon, and was achieved, for the first time in the history of Latin America's growth, in 1946. In that year, the curve for manufacturing, as may be seen in the upper part of plate 7 (table 12), exceeded the curve for agricultural output and, thereafter, the difference between the two has widened constantly.

The disparity between the gross product arising in the two activities is not always similar to the difference between their respective outputs. In 1952, the gross product of manufacturing was only 13.6 per cent above that of agriculture, as compared with a difference of 27.4 per cent between the two outputs. There is a difference between the fluctuations of the gross product and of output in the various sectors of economic activity. This is caused by the disparity in the price movements for goods and services in those sectors; that is, it stems from fluctuations in the relative prices. Although, in part, these reflect variations in the terms of trade, they often, to a great extent, stem from internal forces, among which are inflationary pressures and, in some cases, fiscal policies.

To illustrate these effects, plates 6 and 7 were prepared (table 13). The same procedure was adopted in preparing plate 6 as in the case of plate 1, that is, the curves for the gross product and for output were plotted so that the difference between them represents the size of the effects. At the top appear the curves for the gross product and total output as well as the effects of the terms of trade. In the lower part of plate 6, the relative prices are shown in comparison with the terms of trade.

In the first place, it will be observed that the relative prices for manufacturing have not improved in respect to other activities, in fact, just the contrary. During the Second World War, manufacturing experienced an improvement, but, thereafter, has been subject to persistent deterioration in relative prices (see plates 6 and 7). Deficiencies in the basic data, however, render it necessary to establish certain reservations in connexion with these conclusions, so that they may only be regarded as provisional until further research throws more light on this important subject.

The unfavourable trend of relative prices in manufacturing explains why, between 1945 and 1952, the gross product of manufacturing increased at an annual rate of only 6.4 per cent (excluding Argentina), whereas output, as shown above, rose by 8.0 per cent annually. This was a reversal of the earlier upward trend in the relative prices

Table 12. The gross product, output and relative prices, by activities, in Latin America, 1945–52

Years	*Including Argentina*			*Excluding Argentina*		
	Gross product	*Output*	*Indices of relative prices 1945=100*	*Gross product*	*Output*	*Indices of relative prices 1945=100*
	(millions of dollars at 1950 prices)			*(millions of dollars at 1950 prices)*		
	(1)	(2)	(3)	(4)	(5)	(6)
			A. Agriculture			
1945	7,283	7,283	100.0	5,779	5,779	100.0
1946	8,453	7,843	107.8	6,408	6,269	102.2
1947	8,256	8,167	101.1	6,296	6,471	97.3
1948	8,639	8,449	102.2	6,816	6,764	100.8
1949	8,972	8,497	105.6	7,451	6,935	107.4
1950	9,904	8,603	115.1	8,360	7,093	117.9
1951	9,692	8,916	108.7	8,007	7,318	109.4
1952	9,459	8,768	107.9	7,969	7,412	107.5
			B. Manufacturing and construction			
1945	7,007	7,007	100.0	5,262	5,262	100.0
1946	7,938	7,852	101.1	5,750	5,883	97.7
1947	8,569	8,419	101.8	6,004	6,152	97.6
1948	9,074	9,044	100.3	6,285	6,747	93.2
1949	9,409	9,425	99.8	6,764	7,214	93.8
1950	9,921	10,155	97.7	7,268	7,877	92.3
1951	10,712	10,877	98.5	7,868	8,542	92.1
1952	10,749	11,174	96.2	8,100	9,013	89.9
			C. Other activities			
1945	13,100	13,100	100.0	9,846	9,846	100.0
1946	14,464	13,281	108.9	10,795	9,780	110.4
1947	16,774	14,376	116.7	12,268	10,294	119.2
1948	16,888	14,353	117.7	12,294	10,035	122.5
1949	17,281	15,334	112.7	13,004	11,077	117.4
1950	18,495	15,453	119.7	14,154	11,053	128.0
1951	19,249	15,902	121.0	15,303	11,376	134.5
1952	19,851	16,882	117.6	16,278	12,624	128.9
			D. All activities			
1945	27,390	27,390	100.0	20,887	20,887	100.0
1946	30,855	28,976	131.2	22,953	21,932	114.7
1947	33,599	30,962	142.3	24,568	22,917	118.9
1948	34,601	31,846	144.5	25,395	23,546	126.6
1949	35,662	33,256	143.3	27,219	25,226	142.4
1950	38,320	34,211	166.7	29,782	26,023	179.5
1951	39,653	35,695	164.7	31,178	27,236	184.9
1952	40,059	36,824	161.5	32,347	29,049	180.3

Sources and methods

Col. (1): The estimate of the gross product, by activity, for Latin America, was derived as follows. For ten countries, which accounted for 90 per cent of the gross product of Latin America in 1952, data were available for two or more years of the decade 1940–50. (For sources, see notes to table 18 and notes to the individual country chapters.) For five of these countries (Argentina, Brazil, Chile, Colombia, and Mexico), which accounted for 73 per cent of the gross product of Latin America in 1952, data were available for all years covered in this study. The procedure then, in general, was to estimate the gross product, by activity, for benchmark years (1940 and 1950), on the basis of data for 10 countries, and, for other years, on the basis of the data for 5 countries. The method for deflating the gross product activity sectors, and expressing them in 1950 prices, was based on the assumption, by definition, that the relative percentage composition of the gross product, by activity, was the same in 1950 prices as in current prices. Thus, the concept of the gross product, by activity, as here used, is a measure of the real purchasing power of the gross product originating by sectors.

Col. (2): The estimate of output, by activity, for Latin America, was derived as follows. For 1945, the estimate of output, by activity, is the same as the gross product, by activity, by definition as described in the general note at the end of chapter I. For other years, the estimate is based on data for four countries (Argentina, Brazil, Chile, and Mexico), which accounted for 67 per cent of the gross product and 71 per cent of the output of Latin America in 1952. The estimate of output, by activity, is based on quantum indexes of output, by activity sector, multiplied by 1945 gross product, sector weights, and expressed in 1950 prices, as described in the general note at the end of chapter I.

Col. (3): For activity sectors (agriculture, manufacturing and construction, and other activities), the indexes of relative prices are derived implicitly by dividing col. (1) by col. (2). For the economy as a whole, the price index is the terms of trade index for the external trade sector; see the general note at the end of chapter I.

Cols. (4) and (5): Cols. (1) and (2), respectively, less comparative data for Argentina, table 28, expressed in dollars of 1950, as described in the general note at the end of chapter I.

Col. (6): Same method as col. (3).

Table 13. Annual rates of change in manufacturing's gross product and output in Latin America, 1945–52

(Percentages)

Periods	Including Argentina			Excluding Argentina		
	Gross product (1)	Output (2)	Relative prices 1945=100 (3)	Gross product (4)	Output (5)	Relative prices 1945=100 (6)
1945–52........	6.3	6.9	−0.5	6.4	8.0	−1.4
1951...........	8.0	7.1	0.8	8.2	8.4	−0.2
1952...........	0.3	2.7	−2.3	2.9	5.5	−2.4

Sources and methods

Based on table 12. Cumulative percentage rates of change.

of manufacturing. Comparative data are shown in table 13, which also depicts the same trend when Argentina is included.

It would be well to enquire into the repercussions of this deterioration of the relative prices in the manufacturing sector of Latin America. It is generally recognized that, with certain exceptions, manufacturing has had substantial incentives for development in Latin America. There could be no other explanation for the annual rate of change of 8 per cent for manufacturing output, nor for the intensive rate of investment in this sector, which prevailed throughout the period 1945-52. There are two circumstances which have enabled manufacturing to progress without difficulties. In the first place, the relative prices for manufacturing were favourable during the war, thus contributing to increase its profits. Secondly, the substantial volume of investment in this sector since 1945, in addition to the expanded scale of operations, have greatly improved productivity and this has more than offset the deterioration in relative prices. In fact, the weakening in manufacturing's relative prices was equivalent to only 0.5 per cent annually between 1945 and 1952, for Latin America as a whole, whereas the improvement in output per worker in manufacturing rose simultaneously at an annual rate of 3 per cent. Consequently, the deterioration of the terms of trade was the means whereby the manufacturing sector transferred a part of the benefits of technical progress to the rest of the community.

There is yet another significant phenomenon. The transfer of real income arising from manufacturing was added to the effects of the substantial improvement in the terms of trade since 1945. The full amount was distributed between agriculture and other activities, as explained later.

Agriculture's relative prices improved until 1950, although some sharp fluctuations occurred from year to year, as may clearly be observed in plates 6 and 7. In 1951 and 1952, the relative prices for agriculture deteriorated considerably, so that the ground gained previously was almost entirely lost. This may be seen from a comparison of the rates of change in the gross product and of output shown in table 14.

The deterioration in the relative prices of this sector during the past two years is very evident from the gross product figures shown above, especially when Argentina is included, in which case the results of its lower volume of production sharpen the trend. The influence of external factors can readily be seen in this weakening of the relative prices. In the lower part of plate 7, attention should be drawn to the decline in the curve for agriculture, coinciding with the downward tendency of the terms of trade, after both curves had previously risen together.

Nevertheless it may not be said that the exceptional improvement of the terms of trade since 1945, was reflected to any great extent in agriculture, as seen by comparing the two curves of the chart, both including and excluding Argentina. Naturally, the two relative price indices refer to concepts of different sizes, namely, agricultural output and foreign trade. From a glance at plate 6, it is evident that the improvement shown by the product accruing from agriculture, as compared with agricultural output up to 1950, is much lower than that of the gross product obtained from output for all activities. At all events, the improvement until 1950 weakened in 1951 and 1952, when the terms of trade deteriorated. Hence, the relative position of agriculture in Latin America did not alter greatly between the years 1945 and 1952, as a whole.

Table 14. Annual rates of change in agriculture's gross product and output in Latin America, 1945–52

(Percentages)

Periods	Including Argentina			Excluding Argentina		
	Gross product (1)	Output (2)	Relative prices 1945=100 (3)	Gross product (4)	Output (5)	Relative prices 1945=100 (6)
1945–52..............	3.8	2.7	1.1	4.7	3.6	1.0
1951.................	−2.2	3.6	−5.6	−4.2	3.2	−7.2
1952.................	−2.4	−1.7	−0.7	−0.5	1.3	−1.7

Sources and methods

Based on table 12. Cumulative percentage rates of change.

Table 15. Annual rates of change in the gross product and output in other activities in Latin America, 1945–52

(Percentages)

Periods	Including Argentina			Excluding Argentina		
	Gross product (1)	Output (2)	Relative prices 1945=100 (3)	Gross product (4)	Output (5)	Relative prices 1945=100 (6)
1945–52	6.1	3.7	2.3	7.4	3.6	3.7
1951	4.1	2.9	1.1	8.1	2.9	5.1
1952	3.1	6.2	−2.8	6.4	11.0	−4.2

Sources and methods

Based on table 12. Cumulative percentage rates of change.

This presents a most interesting problem. If agriculture was deprived of any share in the improvement of the terms of trade, and if manufacturing—far from having a share in that improvement—transferred a portion of the benefits of its technical progress, what sectors have gained by these transfers? On the basis of the figures available hitherto, no definite answer can be given, although the mere statement of the problem may provide an incentive for improving estimates of the gross product, in order to clarify such points, which are of undoubted importance. As a result, the data relating to "other activities" in plates 6 and 7, must be taken with these reserves.

The relative prices for these other activities, after deteriorating during the war, later recovered their former level and continued to improve almost constantly until 1951. It would appear that the favourable effects of the terms of trade and the transfer of real income from the manufacturing sector have largely benefited these other activities. This is shown in table 15, where the improvement of the gross product in comparison with output is clearly evident.

These other activities account for somewhat more than half the gross product and comprise transport, trade, construction, mining, personal and government services. It is possible that commercial profits generally were favourably affected by this transfer and that in some cases the expansion of government services also played an important role. This inference, however, can only be regarded as hypothesis, and perhaps it would be wiser not to venture an interpretation without more data.

9. THE GROWTH OF MANUFACTURING AND THE SHIFT IN THE DISTRIBUTION OF THE FACTORS OF PRODUCTION

It was pointed out above that the annual rate of change in manufacturing output for the period 1945-52 was 8 per cent, while that of agriculture was only 3.6 per cent, if Argentina is excluded in both calculations. When that country is included, the difference becomes proportionately sharper as the over-all rate of growth for that period decreases. Table 16 serves to confirm this statement.

In table 16, the rates for 1951 and 1952 are also shown. When Argentina is excluded, apart from the usual fluctuations from one year to another, there is no striking feature to distinguish these years from the over-all period to which they correspond. Including that country, however, agricultural output fell 1.7 per cent in 1952; despite this decline, the improvement in other activities explains why Latin-American output as a whole rose 3.2 per cent in this exceptional year.

The fact that manufacturing expanded at a much higher rate than agriculture, is typical of economic development. As the per capita product rises, needs are modified and demand for industrial commodities increases at a higher rate than that for foodstuffs. It would be absurb to assume that the entire demand could be met from foreign trade. It is sufficient to recall that to supply Latin America with an additional volume of imports, equivalent to the increment in its manufacturing output between 1945 and 1952, or 4,167 millions, the capacity to import would have had to rise by 104.2 per cent during this period, whereas, in fact, it only rose by 49.3 per cent.

This does not imply that the relative sector development was harmonious. There have been examples in which agriculture could have developed considerably more, or, conversely, where its decline could have been prevented without detriment to expansion in manufacturing. These facts, however important they may be as specific cases, by no means modify the general characteristics of development, although they have undoubtedly

Table 16. Annual rates of change in output, by sectors of economic activity, in Latin America, 1945–52

(Percentages)

Periods	Including Argentina				Excluding Argentina			
	Agriculture (1)	Manufacturing (2)	Other activities (3)	Total (4)	Agriculture (5)	Manufacturing (6)	Other activities (7)	Total (8)
1945–52	2.7	6.9	3.7	4.3	3.6	8.0	3.6	4.8
1951	3.6	7.1	2.9	4.3	3.2	8.4	2.9	4.7
1952	−1.7	2.7	6.2	3.2	1.3	5.5	11.0	6.6

Sources and methods

Based on table 12. Cumulative percentage rates of change.

Plate 8

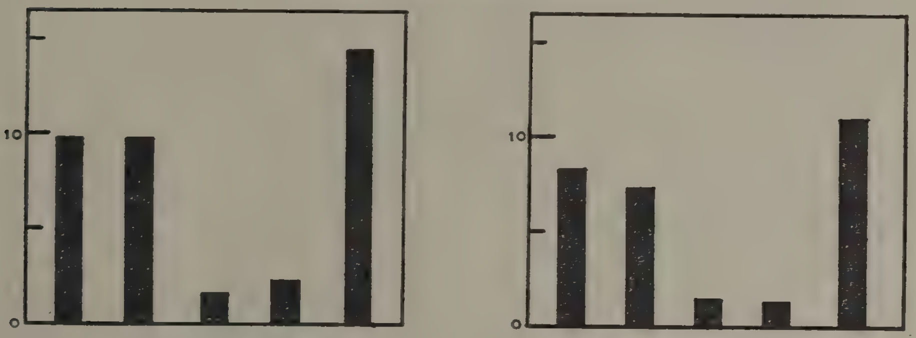
GROSS PRODUCT, BY ACTIVITY AND PER WORKER, IN LATIN AMERICA, 1950

Including Argentina Excluding Argentina

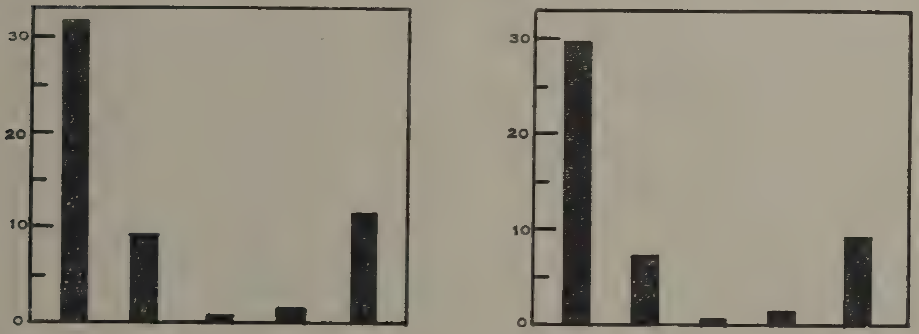
(Natural scale)

Gross product

Thousands of million dollars at 1950 prices

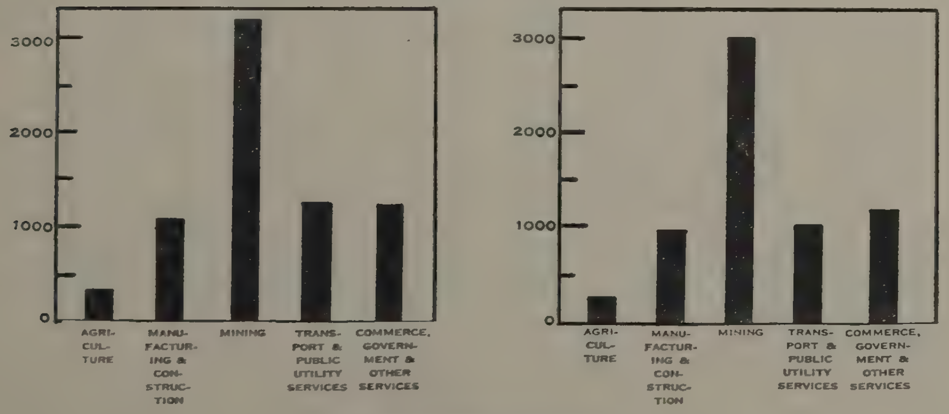


Millions of workers



Gross product per worker

Dollars at 1950 prices



Economic Commission for Latin America

Table 17. The gross product, labour force and product per worker, by activities, in Latin America in 1950

	Gross product		Labour force		Product per worker in dollars at 1950 prices (5)
	Millions of dollars at 1950 prices (1)	As a percentage of all activities (2)	Millions of workers (3)	As a percentage of all activities (4)	
Agriculture	9,904	25.8	32.2	57.9	308
Manufacturing and construction	9,921	25.9	9.2	16.6	1,078
Mining	1,603	4.2	0.5	0.9	3,206
Transport and public utility services	2,268	5.9	1.8	3.2	1,260
Commerce, government and other services	14,624	38.2	11.9	21.4	1,229
TOTAL	38,320	100.0	55.6	100.0	689

Sources and methods

Col. (1): Based on data for ten countries which accounted for 90 per cent of the gross product of Latin America in 1950; see note to table 18.

Col. (2): Based on col. (1).

Col. (3): Same source as col. (1).

Col. (4): Based on col. (3).

Col. (5): Col. (1) divided by col. (2).

influenced the relative intensity of the rates of growth in both activities.

From another standpoint, the higher rate of expansion in manufacturing, as compared with agriculture, reflects a fundamental change in the pattern of distribution of capital and labour resources in Latin America. These resources have tended towards activities in which output per worker is greater, thereby raising the productivity and rate of expansion of the economy as a whole. This process is described more extensively in the report on *The Technique of Programming Economic Development* (Doc. E/CN.12/292). For the present, it will suffice merely to refer to the substantial differences in the levels of productivity during the recent past.

10. DIFFERENCES IN THE LEVELS OF THE GROSS PRODUCT PER WORKER, BY ACTIVITIES

With this objective, plate 8 (table 17) was prepared with data for 1950.[7] The differences in the levels of the gross product, and the gross product per worker in different activities, are quite remarkable. In 1950, the gross product per worker in agriculture was equivalent to 308 dollars, whereas it reached 1,078 dollars in manufacturing and construction, 1,260 dollars in transport and public utility services and 1,229 dollars in commerce, government and other services. The gross product per worker in mining was 3,206 dollars, although the relatively limited number of workers engaged in this activity throughout Latin America, and its limited possibilities for expansion, hardly make this sector the most attractive field for capital and labour which cannot be employed in agriculture. Before dealing with the subject of labour, it should be remembered that the figures for gross product per worker, as well as the total gross product, are affected in the different activities by fluctuations in the relative prices. They are not, therefore, a precise yard-stick of difference in the levels of productivity, although they provide a satisfactory approximation for purposes of the present analysis.

It has just been pointed out that relatively little manpower is engaged in mining. In 1950, only half a million persons were gainfully employed in this sector, as compared with a total working population of 55.6 millions, that is, less than one per cent, although this sector provides 4.2 per cent of the aggregate gross product. In contrast, 32.2 million workers are engaged in agriculture, that is, 57.9 per cent of the total labour force, although the gross product arising in this activity represents scarcely 25.8 per cent of the total. The manufacturing and construction sector has only 9.2 million workers, or 16.6 per cent of the total number of workers, although the gross product of this sector is proportionally higher, namely, 25.9 per cent of the total. The more intense rate of growth of manufacturing and construction may be expected gradually to raise the proportion of workers in these activities and their contribution to the over-all gross product. This is one of the outstanding characteristics of economic development. Commerce, government and other services, together with transport and public utility services, share with manufacturing the task of absorbing labour and capital. In 1950, the former accounted for 21.4 per cent of the working population and 38.2 per cent of the gross product, while the latter employed 3.2 per cent of the labour force and provided 5.9 per cent of the gross product.

11. THE TREND OF THE GROSS PRODUCT AND INVESTMENT, BY COUNTRIES

The previous analysis had a dual objective. The first was to venture for the first time into the general phenomena of recent growth in Latin America, without knowledge of which it is difficult to make an accurate evaluation of the significance of the partial data shown in other parts of the present report. The second objective was concerned with methodology. It is essential to create instruments of analysis that are appropriate for the study of Latin-American phenomena, particularly with respect to the influence of external factors.

Having completed this first assessment of the Latin-American economy as a whole, it would be desirable to employ the same instruments in order to analyse the development of each of the Latin-American countries during

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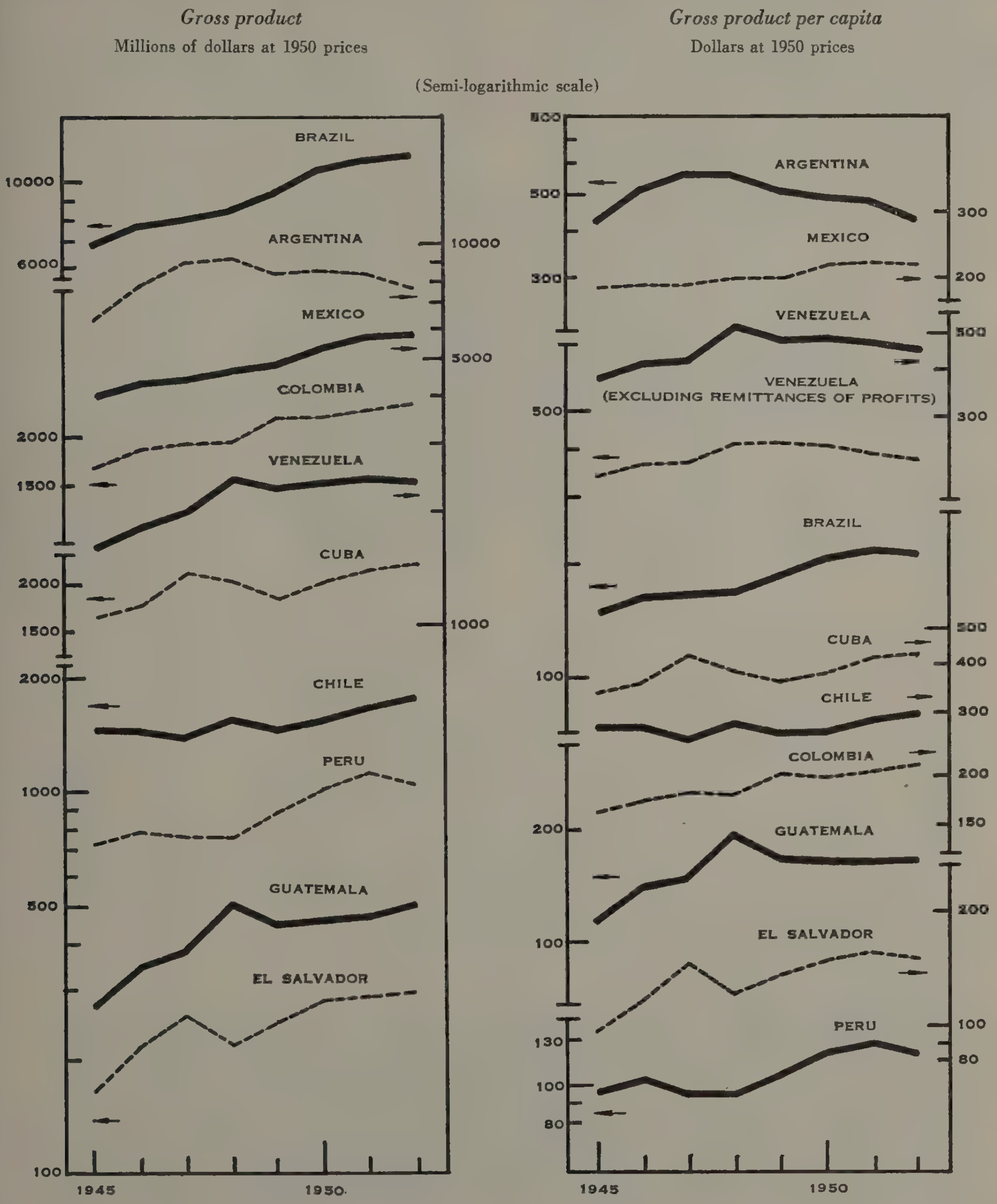
[7] For this year, more detailed figures by sectors are available, permitting a better analysis.

Plate 9

GROSS PRODUCT, TOTAL AND PER CAPITA, IN TEN LATIN-AMERICAN COUNTRIES, 1945-52



Gross product
Millions of dollars at 1950 prices

Gross product per capita
Dollars at 1950 prices

(Semi-logarithmic scale)

the past few years. This task was completed for four countries, and these studies are presented in the following chapter. In extending this analysis to other countries, not only did the short time available prove an obstacle, but it was also necessary to introduce adjustments and to cover omissions in the statistical material. Having established the method of analysis, it is to be hoped that in collaboration with the countries concerned, progress in this work may be achieved.

Meanwhile, it was decided to limit this section to a small number of plates and their corresponding tables, showing data pertaining to the fluctuations of the gross product and investment for ten countries, before proceeding with the analysis of the four countries indicated above.

After all that has already been said in this chapter, it would be redundant to emphasize that the gross product, considered alone, reflects only one aspect of the phenomena of development. Other figures will still be required concerning output and the volume of available goods and services. Nevertheless, the gross product data certainly provide some idea of the rate of development of economic activity, although they do not indicate the relative roles of external and internal factors.

Table 18. The gross product in selected Latin-American countries, 1945–52

	Argentina	*Brazil*	*Chile*	*Colombia*	*Cuba*	*El Salvador*	*Guatemala*	*Mexico*	*Peru*	*Venezuela*
				A. Gross product (millions of dollars at 1950 prices)						
1945.........	6,492	6,936	1,478	1,657	1,655	163	274	4,038	735	1,606
1946.........	7,889	7,760	1,475	1,836	1,797	215	350	4,338	791	1,807
1947.........	9,016	8,084	1,406	1,915	2,160	260	388	4,450	774	1,973
1948.........	9,190	8,464	1,571	1,951	2,021	218	510	4,688	775	2,387
1949.........	8,429	9,308	1,494	2,258	1,893	250	451	4,862	892	2,270
1950.........	8,524	10,836	1,552	2,268	2,010	282	464	5,412	1,016	2,388
1951.........	8,460	11,420	1,671	2,338	2,206	293	472	5,738	1,116	2,409
1952.........	7,698	11,860	1,796	2,451	2,273	300	511	5,762	1,058	2,387
				B. Percentage, annual change compared with preceding year						
1946.........	21.5	11.9	−0.2	10.8	8.6	31.9	27.7	7.4	7.6	12.5
1947.........	14.3	4.2	−4.7	4.3	20.2	20.9	10.9	2.6	−2.2	9.2
1948.........	1.9	4.7	11.7	1.9	−6.4	−16.2	31.4	5.4	–	21.0
1949.........	−8.3	10.0	−4.9	15.7	−6.3	14.7	−11.6	3.7	15.1	−4.9
1950.........	1.1	16.4	3.9	0.4	6.2	12.8	2.9	11.3	13.9	5.2
1951.........	−0.8	5.4	7.7	3.1	9.8	3.9	1.7	6.0	9.8	0.9
1952.........	−9.0	3.8	7.5	4.8	3.0	2.4	8.3	0.4	−5.2	−0.9
Annual rates of change										
1945–52......	2.5	8.0	2.8	5.8	4.6	9.1	9.3	5.2	5.3	5.8
				C. Distribution of the gross product as a percentage of the total						
1945.........	23.7	25.3	5.4	6.0	6.0	0.6	1.0	14.7	2.7	5.9
1946.........	25.6	25.1	4.8	6.0	5.8	0.7	1.1	14.1	2.6	5.8
1947.........	26.8	24.1	4.2	5.7	6.4	0.8	1.2	13.2	2.3	5.9
1948.........	26.6	24.5	4.5	5.6	5.8	0.6	1.5	13.5	2.2	6.9
1949.........	23.6	26.1	4.2	6.3	5.3	0.7	1.3	13.6	2.5	6.4
1950.........	22.2	28.3	4.0	5.9	5.2	0.7	1.2	14.1	2.6	6.2
1951.........	21.3	28.8	4.2	5.9	5.6	0.7	1.2	14.5	2.8	6.1
1952.........	19.2	29.6	4.5	6.1	5.7	0.7	1.3	14.4	2.6	6.0

Sources and methods

The gross product for individual countries, in national currency, at 1950 prices, was expressed in dollars of 1950 in accordance with the criteria and purchasing power parity rates of exchange cited in the general note at the end of chapter I.

Sources and methods for individual country data are as follows:

Argentina: See notes to table 20.

Brazil: See notes to table 33.

Chile: See notes to table 44.

Colombia: 1945–50: Banco de la República, unpublished tabulation, deflated by cost-of-living index for workers in Bogotá; *Informe Final*, September 1950–August 1951, Comité de Desarrollo Económico, Bogotá, Colombia. 1951–52: Estimated by the United Nations Economic Commission for Latin America.

Cuba: 1945–52: *Memoria Anual, 1951-52*, Banco Nacional de Cuba, Havana, Cuba, December 1952.

El Salvador: 1945–46: *Public Finance in a Developing Country, El Salvador—A Case Study*, by Henry C. Wallich and John H. Adler, Harvard University Press, Cambridge, Massachusetts, 1951. 1947–49: "Recent Developments and Trends in the Economy of El Salvador", United Nations Economic Commission for Latin America, document presented at the fourth session, Mexico City, Mexico, 28 May 1951. 1950: "Estimate of Gross National Product of El Salvador, 1950", by A. Derosso, Economic Assistant, United Nations Technical Assistance Mission to El Salvador, 1952. 1951–52: Estimated by the United Nations Economic Commission for Latin America.

Guatemala: 1945–51: *Producto Nacional Bruto de Guatemala en los Ultimos 24 Años*, by J. Antonio Palacios G., Banco de Guatemala, December 1952; public investment, unofficial estimate. 1952: Estimated by the United Nations Economic Commission for Latin America.

Mexico: See notes to table 55.

Peru: 1945–1951: *La Renta Nacional del Perú, 1942–1951*, Banco Central de Reserva del Perú, 1952. 1952: Estimated by the United Nations Economic Commission for Latin America.

Venezuela: 1945–46: Estimated by the United Nations Economic Commission for Latin America. 1947–51: *Memoria, Correspondiente al Ejercicio Anual 1951*, Banco Central de Venezuela, Caracas, Venezuela. 1952: Estimated by the United Nations Economic Commission for Latin America.

There can be no doubt, however, that external factors exercise strong influence on the trend of a good many of the countries here considered. They account for the extremely rapid growth of certain countries, among which El Salvador and Guatemala are outstanding examples, with annual rates of growth in the gross product of 9.1 per cent and 9.3 per cent, respectively, between 1945 and 1952. It is evident that the improvement in the terms of trade, originating in the rise of coffee prices, was the main cause of these exceptional rates of growth. In a later chapter it will be seen that this factor also accounts for the relatively sharp rate of 8 per cent for the same period in Brazil, which experienced the most rapid rate of development among the larger countries. Undoubtedly, Colombia's annual rate of growth of 5.8 per cent was also influenced by higher coffee prices.

Attention should be drawn to the fact that Mexico, a country in which the improvement in the terms of trade was not so remarkable, has nonetheless recorded one of the highest rates of growth among the larger countries, namely, 5.2 per cent.

Argentina, on the contrary, where the terms of trade were far more favourable until recently, shows one of the lowest rates of expansion of the gross product between 1945-52, that is, 2.5 per cent annually. This cannot be attributed to the fact that the terms of trade failed to produce any positive results. That was not the case, and Argentina's development was remarkably rapid during the period 1945-48. Later, however, a recession set in, resulting directly and indirectly from the decline of agricultural production, affected by the poor harvests of 1952 caused by very adverse climatic conditions.

In Chile, the figures for the average annual rate of growth of the gross product are relatively low: 2.8 per cent. Cuba also has an intermediate position, with an annual growth rate of 4.6 per cent, since the improvement in the terms of trade arising from sugar exports was of short duration. Venezuela, on the other hand, has a high rate of development influenced exclusively by the quantum of exports, as there appears to have been a deterioration in the terms of trade. Peru attained a rate similar to that of Brazil, and it might have been higher except for the estimated decline of 1952.

The same exceptional expansions were noted in the rate of investments, in comparison with that of the gross product. It is not surprising, after what has been said with regard to the gross product, that Brazil should also have experienced one of the highest rates of investment, namely, 18.4 per cent for 1952.

Chile is in the extreme opposite position with a rate of investment of only 11.1 per cent. Mexico, Argentina and Colombia, are in an intermediate situation, with rates of 16.3 per cent, 15.5 per cent and 13.8 per cent, respectively. It should also be noted that the Argentine rate had reached a maximum of 20.5 per cent in 1949, while Colombia had a rate of 16.4 per cent in 1947.

The rate for El Salvador rose sharply until 1952, when it was 19.3 per cent, although it never reached the maxima achieved in other countries, as a consequence of the exceptional rate of development of its gross product. (See tables 18 and 19.)

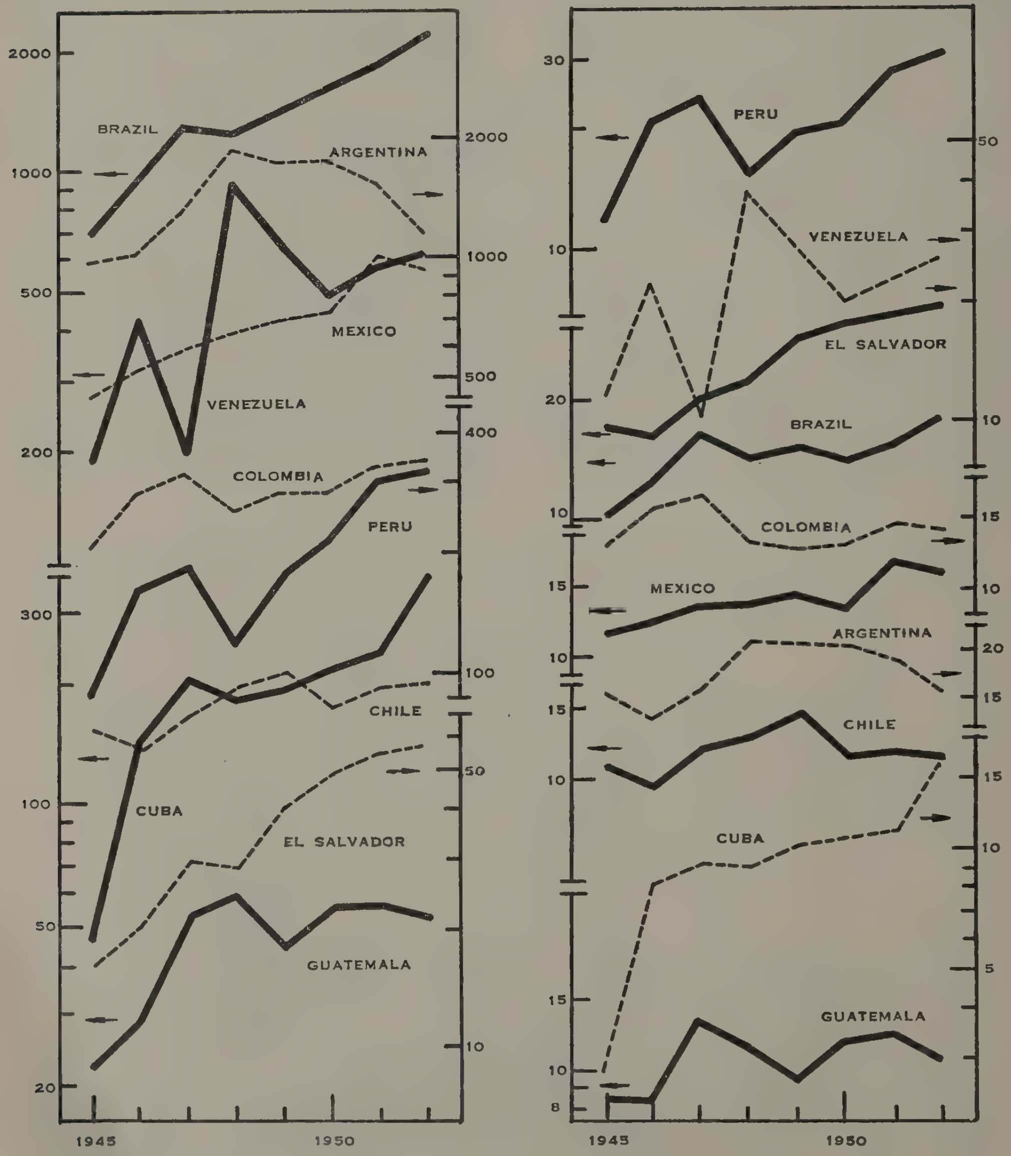
Table 19. Product per capita and investment in selected Latin-American countries, 1945–52

	Argentina	*Brazil*	*Chile*	*Colombia*	*Cuba*	*El Salvador*	*Guatemala*	*Mexico*	*Peru*	*Venezuela*
				A. Product per capita (dollars at 1950 prices)						
1945..	422	150	274	164	338	96	114	182	97	373
1946..	506	164	273	178	359	119	140	190	101	411
1947..	567	167	256	182	424	144	149	190	98	438
1948..	564	170	280	181	389	121	196	194	96	519
1949..	505	183	262	205	364	139	167	196	109	473
1950..	496	208	268	201	372	148	166	211	121	487
1951..	481	214	283	207	401	154	163	218	130	472
1952..	428	217	299	213	406	150	165	214	122	450
				B. Investment (millions of dollars at 1950 prices)						
1945..	984	700	155	202	46	16	22	450	86	182
1946..	1,032	960	140	287	149	20	29	525	162	408
1947..	1,381	1,352	168	315	201	29	52	600	184	199
1948..	1,873	1,264	196	254	186	28	60	650	117	918
1949..	1,730	1,448	218	283	193	40	44	700	175	649
1950..	1,714	1,616	178	284	220	49	55	738	207	498
1951..	1,587	1,868	199	328	245	55	57	1,000	303	561
1952..	1,190	2,180	200	339	374	58	54	938	319	628
				C. Investment as a percentage of the gross product						
1945..	15.2	10.1	10.5	12.2	2.8	9.8	8.0	11.1	11.7	11.3
1946..	13.1	12.4	9.5	15.6	8.3	9.3	8.3	12.1	20.5	22.6
1947..	15.3	16.7	12.0	16.4	9.3	11.2	13.4	13.5	23.8	10.1
1948..	20.4	14.9	12.5	13.0	9.2	12.8	11.8	13.9	15.1	38.4
1949..	20.5	15.6	14.6	12.5	10.2	16.0	9.8	14.4	19.6	28.6
1950..	20.1	14.9	11.5	12.5	10.9	17.4	11.9	13.6	20.4	20.9
1951..	18.8	16.4	11.9	14.0	11.1	18.7	12.1	17.4	27.2	23.3
1952..	15.5	18.4	11.1	13.8	16.4	19.3	10.6	16.3	30.1	26.3

Sources and methods—Same as table 18.

Plate 10

INVESTMENT AND THE INVESTMENT RATE IN TEN LATIN-AMERICAN COUNTRIES, 1945-52



Total investment

Thousands of million pesos at 1950 prices

Investment as a percentage of the gross product

(Semi-logarithmic scale)

General note on concepts, sources and methods

GROSS PRODUCT

The analysis of part I is based on the concept of the gross geographic product, at market prices, which represents the total value of the production of goods and services within the geographic limits of a country or group of countries, and in this case refers to the twenty republics of Latin America. The gross geographic product is considered to be an appropriate instrument for measuring economic activity and economic growth. It differs from the national product concept by including income (principally profits and interest) paid to, and excluding factor income received from, the rest of the world.

CONCEPT EQUIVALENTS

Gross geographic product (ECLA) is here considered equivalent to the following concepts *which appear in many studies:*

Gross domestic product
Gross internal product

The concept used here is identical to the concept of "the gross domestic product at market prices" used in the report by the group of national income experts appointed by the Secretary-General (*Studies in Methods,* No. 2; *A System of National Accounts and Supporting Tables,* report prepared by a group of national income experts appointed by the Secretary-General, United Nations Department of Economic Affairs, Statistical Office, New York, 1953).

The concept used here is also similar to the "net geographic product at factor cost", a concept used in the statistical papers, Series H, of the United Nations (see, for example, *Statistical Papers, Series H, No. 4, Statistics of National Income and Expenditure,* United Nations, New York, August 1953, notes to table 4). The gross geographic product, at market prices, differs from the net geographic product, at factor cost, by including indirect taxes and depreciation allowances.

The calculations are based on data for sixteen countries, which together comprise 96 per cent of the population and 98 per cent of the gross geographic product of Latin America. For the most part, the calculations are based on official sources. In some cases, where official statistics were not available, unofficial sources have been used. Estimates for individual countries have been adjusted, where necessary, to achieve uniformity and comparability in concept.

A detailed description of the adjustments to official statistics for uniformity of concept and comparability, is indicated by country and by individual statistical series, in the notes to the tables in the individual country chapters. Some of the principal types of adjustments are discussed below. In general, the gross product of the countries of Latin America is calculated as the sum of the value added, by activities, which, in turn, represents the gross value of production, *less* the value of goods and services purchased from other sectors and consumed in production. Since the gross product, in Latin America, is not usually estimated by type of final expenditure, consumption has been estimated, in most cases, as a residual function of the gross product, plus the excess of imports, or minus the excess of exports, and minus gross investment. Since the gross investment data for Latin America covers fixed investment only, in most cases, and excludes changes in inventories, the estimate of consumption includes inventory changes. This does not make for a serious problem of interpretation since, in most cases, inventory changes probably do not exceed 2 or 3 per cent of the gross product. Important exceptions to this occur, however, in those cases of primary raw materials exporting countries experiencing an unusual addition to or withdrawal from the stock of primary materials available for export.

The gross product and its components are estimated at 1950 prices; that is to say, the gross product series are expressed in terms of constant values. The method used to express the gross product in terms of constant value was as follows. In the case of Argentina, Brazil, and Mexico, the gross product, at 1950 prices, was estimated as a function of indexes of the physical volume of output by activity sectors, aggregated on the basis of the gross product by activity sectors in 1945, plus the effect of external terms of trade with respect to 1945 (all expressed at 1950 prices). In the case of Chile and the remaining countries of Latin America, the gross product, in current pesos, was deflated by a composite index, whose main component is the cost-of-living index. In general, this latter method is considered to be less satisfactory than the former. In addition to shortcomings in the representativeness and weighting of price indexes available at present, distortions may also be introduced in the measurement of real prices (and, therefore, of factor costs and real output) by the introduction, or removal, of consumer subsidies and taxes, which have played an important role in many countries of Latin America in recent years. The sources, methods and concepts are discussed in greater detail in the individual country chapters.

For simplification, the terms "geographic" and "constant values at 1950 prices" are not shown in the text.

The different national currencies were reduced to a common denominator of dollars at 1950 prices to obtain the aggregate estimates for Latin America. This was done by converting the gross product data for each country, in national currency in prices of 1950, on the basis of purchasing power parity rates of exchange with respect to the dollar.

The parity base is a pre-war year, in most cases 1937, with the parity rate for 1950 estimated as a function of this base and the relative movements of general price indexes, usually the implicit gross product deflator index, in the United States and in the individual country. It was considered that, for purposes of conversion, the controlled and, in many cases, arbitrary exchange rates during and after the war could not be used since these rates do not correspond to an equilibrium situation. Neither did the use of "free" rates appear to be appropriate, inasmuch as under conditions of strict exchange controls such rates refer only to a very restricted volume of transactions. For a more detailed discussion of the purchasing power parity rates of exchange concept here used, reference may be made to the notes in the individual country chapters in this study and to the following report: *Statistical Papers, Series E, No. 1, National and Per Capita Incomes, Seventy Countries—1949,* United Nations, Statistical Office, New York, October 1950, pp. 11 and 12. The purchasing power parity rates of exchange, for 1950, derived by this method and here used are as follows:

	Units of national currency per dollar
Argentina	6.3
Brazil	25.0
Chile	85.0
Colombia	2.7
Cuba	1.0
El Salvador	3.0
Guatemala	1.0
Mexico	8.0
Peru	15.0
Venezuela	3.5

EFFECT OF THE TERMS OF TRADE

The gain or loss from changes in the terms of trade with respect to 1945 (or, more briefly, the effect of the terms of trade) is defined as the product of the value of exports, in 1950 prices, and the changes in the terms of trade since 1945. The terms of trade index is computed as the ratio of export prices to import prices. The import and export price indexes are computed on the basis of the Paasche formula, with variable quantum weights for each year. The price component of the Paasche indexes are unit values.

OUTPUT

Output is defined as the physical volume of the geographic production of goods and services, with 1945 gross product activity sector weights, expressed in 1950 prices. Since the quantum measure of production reflects the relative price and weight structure in 1945, the external terms of trade effect, with respect to 1945, is excluded. The method used in the case of Argentina, Brazil, and Mexico provided a direct estimate of output. In the case of Latin America, as a whole, and Chile, output is estimated as a function of the gross product minus the effect of the terms of trade with respect to 1945.

STOCK OF CAPITAL

The stock of capital as here used may be defined as the depreciated replacement value (in 1950 prices) of reproducible tangible and durable capital goods. Land, consumer durable goods, inventories and monetary metal are excluded from the stock of capital as here defined. With respect to inventories, the exclusion was mainly due to the inadequacy of information on the stock of inventories or annual changes in their level.

The concept here used is comparable with the narrower of the two concepts used by Raymond W. Goldsmith, entitled "Structures and Producers' Equipment". (See for example the study entitled "The Growth of Reproducible Wealth of the United States of America from 1805 to 1950", which appears in the volume *Income and Wealth of the United States; Trends and Structure, Income and Wealth, Series II*, International Association for Research in Income and Wealth, Cambridge, England, 1952; table 5, p. 297.)

The addition of inventories to the estimated capital stock of Latin America would raise the level of the latter by an estimated one-sixth to one-fifth.

The method of estimation was suggested by the work of Goldsmith referred to above. (See also Goldsmith's paper entitled "A Perpetual Inventory of National Wealth", included in *Studies in Income and Wealth,* volume fourteen, Conference on Research in Income and Wealth, National Bureau of Economic Research, New York, 1952.) In general, comprehensive and partial censuses of the stock of capital have been combined with time series on gross and net capital formation, to yield a continuous estimate of the depreciated replacement value of the stock of capital, at 1950 prices. It should be noted that the character, quality, and comprehensiveness of the census type estimates of the stock of capital, for benchmark years, are heterogeneous, and that the quality and completeness of the estimates varies greatly from country to country. In addition, the problem of interpreting and correctly adjusting for the base year valuation has been serious. As a general practice, in view of this problem, pre-war census benchmark estimates have been more heavily relied on than post-war census data in view of the multiplicity of valuation problems (as a consequence of price inflation), involved in using post-war census data.

Another important variable in the estimating method is the length of life assumption for capital goods. In general, a longer length of life and lower real rate of depreciation has been used than is the case in the United States, taking into account the difference in the economic character of obsolescence, deriving from the differences in relative costs of labour and capital. The impact of the growth rate on the depreciation rate has also been taken into account; see for example "Depreciation Allowances, Replacement Requirements and Growth", by Robert Eisner, published in *The American Economic Review*, December 1952, volume XLII, No. 5, which suggests that depreciation allowances exceed replacement requirements in growing economies.

It should be noted that seven countries, for which rather substantive information on the stock of capital is available (Argentina, Brazil, Chile, Colombia, Cuba, Mexico and Venezuela), accounted for an estimated 85 per cent of the gross product, and 90 per cent of the stock of capital of Latin America, in 1952.

The provisional and preliminary character of the estimates of the stock of capital is emphasized. The sources and methods for the individual country estimates are described in notes to the individual country chapters. One of the purposes of presenting these estimates of the stock of capital is to stimulate critical comment and intensification of work in this field throughout Latin America.

OUTPUT-CAPITAL RATIO

It should be noted that the output-capital ratio used here differs from that of Kuznets, Fellner, and the broader of the two concepts of Goldsmith for the following two reasons, principally:

(*a*) The estimate of capital excludes business inventories and consumer durable goods;

(*b*) The estimate of output includes depreciation.

(See the paper by William J. Fellner, "Long-Term Projections of Private Capital Formation: The Rate of Growth and Capital Coefficients", Conference on Research in Income and Wealth, May 1951, National Bureau of Economic Research, New York; and the papers by Kuznets and Goldsmith, "Income and Wealth of the United States", *op. cit.*)

As a consequence, the Fellner, Kuznets output-capital ratio and the broader of the two concepts of Goldsmith have an order of magnitude of 0.30 in contrast with that of 0.45 for ECLA.

It should also be noted that the narrower of the two output-capital ratio concepts of Goldsmith, which is closely comparable with that of ECLA, has an order of magnitude of 0.40. In addition, it may be seen that if the output-capital ratio for Latin America were to be adjusted to the Fellner, Kuznets concept by adding inventories and consumer durable goods to capital (a probable increase of some 20 per cent), and subtracting depreciation from output (approximately 7 per cent), the present ECLA ratio of 0.45 would be equivalent to an adjusted ratio of 0.35.

In any event, the unusually favourable factors enhancing the post-war economic growth of Latin America, and the improved utilization of capital, labour, and natural resources, as discussed in the text, must be given due consideration in interpreting the ECLA ratio referred to above.

Moreover, the methodology here utilized provides a significant check on the internal consistency between the output-capital ratio, the investment rate, and the rate of growth in output in Latin America. In the statistical methodology here used, these three statistics are basically independently derived. Thus, if the output-capital ratio is assumed to be overstated, then the investment rate must have been higher, or the growth in output lower.

Reference must also be made to the fact that the analytical methodology here used has drawn freely from the contemporary work in the field of analysis of economic growth of a number of economists, in addition to those already cited, including E. D. Domar, H. W. Singer, W. Leontieff, and many others.

BALANCE OF PAYMENTS

The balance of payments concept here used is similar to that of the International Monetary Fund, *Balance of Payments Yearbook,* vol. 1-4, with the exception that, consistent with the geographic treatment of the gross product, remittances of profits and interest are considered as transfers. These, together with the capital account of the balance of payments, cover the excess of imports or exports of goods and services on current account.

In order to express the balance of payments data in constant prices of 1950, a general price index, usually the implicit gross product deflator, was used. For individual countries, the balance of payments data are expressed in national currency measured in terms of purchasing power parity rates of exchange, as described above, both to facilitate the appropriate integration and analysis of the external trade sector with the economy as a whole, and to facilitate international comparisons.

As a consequence of the concept and methodology here used, it should be noted, the balance of payments data are expressed in real terms, but exports and imports of goods are not expressed in quantum terms, and the structure of the balance of payments is not affected by the exchange rate conversion method here used.

POPULATION AND LABOUR FORCE

Population figures are from the United Nations *Statistical Bulletin,* with the following exceptions: population figures for Chile are from the Corporación de Fomento de la Producción; for Ecuador, from *Study on the Economic Development of Ecuador* (E/CN. 12/295), 1953, United Nations Economic Commission for Latin America; for Haiti, from estimates of the Statistics Division of the United Nations Economic Commission for Latin America; for Argentina from official data in *Síntesis Estadística Mensual de la República Argentina.*

Labour force estimates are based on official sources or estimates by ECLA as indicated in the individual country chapters.

LATIN AMERICA EXCLUDING ARGENTINA

A short note of explanation is required to indicate the reasons for including an analysis of "Latin America excluding Argentina" in the economic survey. Three important factors argued for the inclusion of an analysis of "Latin America excluding Argentina", as follows: (1) On the basis of the gross product per capita, Argentina has outgrown the stage of under-development. Since Argentina accounted for an average of one-fourth of the gross product of Latin America, in the period 1945-52, it was important to exclude Argentina for the purpose of developing a composite analysis of the under-developed countries of Latin America; (2) Argentina experienced a distinctive post-war trend with respect to the terms of trade, benefiting from a very marked improvement in the terms of trade in the early post-war years, and suffering a worsening in the terms of trade after 1948, whereas, for the rest of Latin America, terms of trade did not worsen until after 1951; and (3) the Argentine drought in 1952 adversely affected the gross product for the Argentine economy as a whole, at a time when the gross product for other countries of Latin America was still rising.

Chapter II

ANALYSIS BY SELECTED COUNTRIES

A. Argentina[1]

1. AGRICULTURE AS THE BASIS FOR SUSTAINING ECONOMIC DEVELOPMENT IN ARGENTINA

Briefly stated, the fundamental development problem in Argentina, as in other Latin-American countries, centres on utilizing primary exports in such a way as to reduce the dependence upon them gradually. There are two reasons for such a policy, from the strictly economic standpoint. They are the need, firstly, to diminish the vulnerability of the domestic economy to external fluctuations and, secondly, to accelerate the rate of development beyond the restrictive level imposed by external factors.

It is natural that during this process the relative importance of primary production should decline, while manufacturing and other activities progress. A high rate of industrial expansion is inevitable in economic development. However, manufacturing cannot develop independently of primary activities since its rate of expansion is limited by the capacity to import. This results not only from the extent to which development requires capital goods, but also from the inherent growth of domestic demand for raw materials and fuels, and other direct effects of the increase of the gross product on imports. It is obvious that the capacity to import depends essentially both on the quantum of exports—for the most part primary products—and the terms of trade, as well as the inflow of foreign capital. These provide the resources to cover imports, after payment of the remittances due on foreign capital. It is possible that these resources might prove inadequate at a given moment, either because economic activity has developed rapidly, or because the capacity to import has been adversely affected. At such times, the only solution is to continue increasing the capacity to import as much as possible, if growth is not to be checked, and to introduce structural changes in the economy which will enable the lower capacity to import to sustain a larger volume of the gross product. However, in order to effect these structural changes, it is often essential to increase that capacity, at least temporarily, in order to obtain the required capital goods, since it may not be possible or desirable to diminish other imports.

This is one of the main problems at present confronting Argentina's economy. In short, Argentine manufacturing, after developing remarkably in the post-war period, now finds that its sustaining basis is inadequate owing to the sharp decline of agricultural output, as well as with an increase of domestic food consumption which has proved detrimental to exports. Moreover, there has been a persistent pressure on demand for energy. These are the principal obstacles which the second five-year plan proposes to eliminate.

The decline in the agricultural sector is by no means a new phenomenon. Undoubtedly, the poor harvests of 1951 and 1952 emphasized the trend, but Argentine agriculture, after recovering from the disastrous consequences of the world economic crisis in the thirties, had already progressed with difficulty since the Second World War. The downward trend began early in the forties and was caused by familiar difficulties encountered in world markets. A few years later, in the latter half of the decade, the exceptional recovery in the terms of trade and in foreign demand, might have offered agriculture the incentives which had previously been lacking. Agriculture, in effect, needed a stimulus which would enable it to compete favourably with manufacturing for available labour and capital resources. Other requirements had higher priority, however, so that agriculture declined even more sharply. It is hardly surprising, therefore, that the re-establishment of agriculture as the sustaining basis for Argentina's economic development should be a cardinal point in the new government plan. Farmers are being provided with new incentives, in the form of better relative prices and credit facilities, and much has been done to bring investment up to date, particularly by mechanization. Owing to the influence of these incentives and to favourable weather conditions, harvests in 1953 reached very satisfactory levels.

It would not be an exaggeration to say that a fair proportion of the labour force drawn from agriculture during the years of industrial development might have been replaced by mechanization, and that such substitution may now be accomplished with the introduction of the new phase of mechanization. Should this be achieved, not only would a greater consistency be re-established between agriculture and manufacturing, but the latter would also obtain the resources required to pursue its development.

Meanwhile, however, external conditions have developed adversely. The terms of trade, after improving by 77.9 per cent between 1945 and 1948, are now below their earlier level, which was hardly favourable. Hence, the incentive of improved relative prices for crops, as established by the Argentine Government in its new policy of agricultural development, cannot be based upon a favourable margin in the terms of trade, since that margin has now practically disappeared. The impact will inevitably fall on urban consumption, which has been adversely affected by the decline in the gross product since 1948. The efficient fulfillment of the new investment plan depends

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[1] The calculations made in this analysis were based on gross product data valued in terms of pesos at 1950 prices, that is to say, all the gross product series are expressed in constant prices. In this and other connexions, see the general note at the end of chapter I.

Plate 11

RECENT ECONOMIC DEVELOPMENT IN ARGENTINA, 1945-52

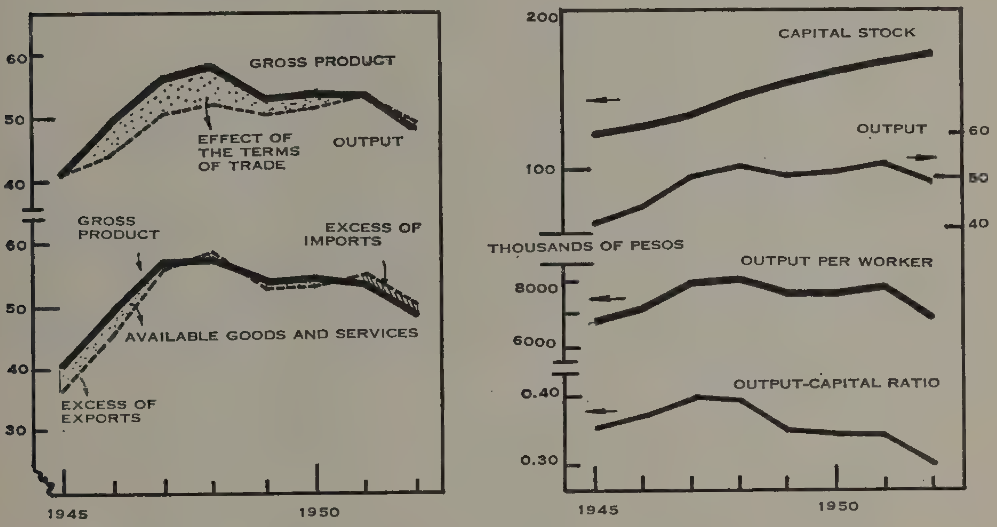
Gross product, output and available goods and services

Output, capital stock and productivity

Thousands of million pesos at 1950 prices

(Natural scale)

(Semi-logarithmic scale)

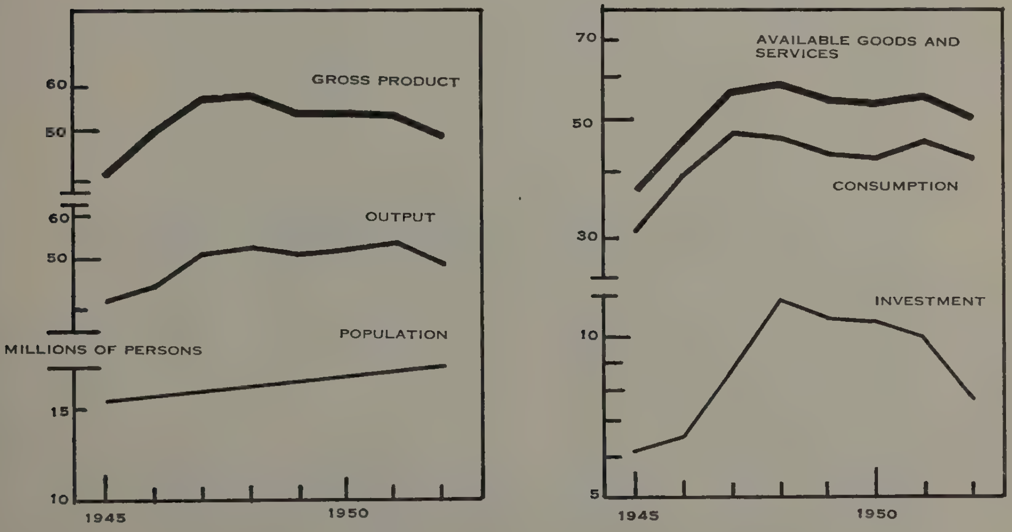


Rate of growth of the gross product and of output

(Semi-logarithmic scale)

Available goods and services and their distribution in consumption and investment

(Semi-logarithmic scale)



largely on the possibility both of maintaining consumption at a moderate level and of increasing productivity. This explains the firm policy of austerity clearly stated by responsible government officials. Nevertheless, an exaggerated interpretation of this situation should be avoided. Despite a poor harvest and the decline of the gross product, per capita consumption in 1952 was estimated at 2,356 pesos at 1950 prices, representing an annual rate of growth of 2.3 per cent between the years 1945 and 1952.

2. THE GROSS PRODUCT AND OUTPUT

Due to the extraordinary influences prevailing in 1952, Argentina's total output fell for the first time in several years. The decline in agricultural output was undoubtedly the most important contributing factor. This agricultural decline had been evident since 1947, but continuing growth in manufacturing, although at a reduced rate, had served to compensate for it. In 1952, however, manufacturing output in turn recorded a decline, to which were added, on one hand, the effects on agriculture of the severe drought, and on the other, the deflationary government policies.[2] The adoption of this government policy was designed to restrict demand in view of the fall in the capacity to import and the decline in agricultural products available for domestic consumption. These combined influences serve to explain the fall in total output during 1952. To these depressive factors were added the considerable decline in the terms of trade during that year. As a result, Argentina's gross product in 1952 was reduced to 48,500 million pesos at 1950 prices, a fall of 16.2 per cent from the maximum of 57,900 millions reached in 1948.

The 1952 decline undoubtedly eliminated an appreciable proportion of the economic gains achieved by Argentina over previous years. But it may be noted that the growth in the gross product between 1945 and 1951 (that is, excluding 1952 when Argentina experienced extraordinarily unfavourable factors) was nonetheless comparable with the growth in 1935-45. During that decade, the gross product expanded at an annual rate of 4.2 per cent, compared with 4.5 per cent for 1945-51. In any event, and despite the sharp decline in 1952, the growth achieved in the earlier post-war years permitted an annual increase of 2.6 per cent in output between 1945 and 1952, and of 2.5 per cent in the gross product during the same period.

When agriculture has recovered, Argentina should be able to make efficient use of its ample manufacturing capacity. At that stage, the Argentine economy should be able to achieve a growth rate similar to that between 1945 and 1951, subsequently to surpass it as a consequence of renewed investments.

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[2] Message of the President of Argentina to the 87th session of the National Congress, 1 May 1953, vol. II, p. 177.

Table 20. Population, gross product, output, capital and productivity in Argentina, 1945–52

(Pesos at 1950 prices)

Years	*Population (in millions)* *(1)*	*Gross product (thousands of million pesos)* *(2)*	*Effect of the terms of trade since 1945* *(thousands of million pesos)* *(3)*	*Effect of the terms of trade since 1945* *As a percentage of gross product* *(4)*	*Output (thousands of million pesos)* *(5)*	*Capital (thousands of million pesos)* *(6)*	*Output-capital ratio* *(7)*	*Output per worker (pesos)* *(8)*
1945	15.4	40.9	–	–	40.9	116.0	0.35	6,712
1946	15.6	49.7	5.4	10.9	44.3	119.9	0.37	7,147
1947	15.9	56.8	6.2	10.9	50.6	125.9	0.40	8,029
1948	16.3	57.9	5.7	9.8	52.2	134.9	0.39	8,157
1949	16.7	53.1	2.6	4.9	50.5	142.7	0.35	7,776
1950	17.2	53.7	2.2	4.1	51.5	150.7	0.34	7,680
1951	17.6	53.3	0.1	0.2	53.2	157.3	0.34	7,825
1952	18.0	48.5	−0.4	−0.8	48.9	161.5	0.30	6,891

Sources and methods

Col. (1): Official data published in *Síntesis Estadística Mensual de la República Argentina*, Presidencia de la Nación, Ministerio de Asuntos Técnicos, Buenos Aires, Argentina.

Cols. (2), (3), (4), (5) and (6): See general note at the end of chapter I for general explanation of concepts and methods. The basic source for the gross product data on Argentina is an unofficial and unpublished study which carries forward, for the years 1946–52, the gross product and output estimates for the years 1935–45 as published in *La Renta Nacional de la República Argentina*, Banco Central de la República Argentina, Buenos Aires, Argentina, 1946. In this latter study are presented: (1) the gross product, by activity sector, in current prices, and (2) output, by activity sector, in 1935 prices, based upon the multiplication of indexes of the physical volume of the production of goods and services by the 1935 gross product activity sectors. The gross product data here presented will be replaced by official data when published.

Col. (2): Col. (5) plus col. (3).

Col. (3): Based on an index of the terms of trade calculated by the United Nations Economic Commission for Latin America.

Col. (4): Col. (3) as a percentage of col. (2).

Col. (5): See reference above.

Col. (6): See the general note at the end of chapter I for a discussion of the general concept and methods used in estimating the stock of capital. The following is a summary of the sources and methods used in estimating the stock of capital in Argentina. As is indicated in the general note at the end of chapter I comprehensive and partial censuses of the stock of capital have been combined with time series on gross and net capital formation all expressed in 1950 prices, to yield a continuous estimate of the depreciated replacement value of the stock of capital, in 1950 prices. The description of the sources and methods is divided into two parts: (1) gross investment; and (2) the integration of the gross investment data with census benchmarks to develop the estimates of the stock of capital.

(1) *Gross investment*

The estimates of gross investment here used are based on the unofficial (and, as yet, unpublished) study: *Estudio de la capitalización bruta de la Argentina, 1900–1950*, by Dr. César H. Belaúnde, University of Buenos Aires, Buenos Aires, Argentina. In this study, gross investment is defined as comprising: (1) durable equipment, machinery and vehicles, including both domestically produced and imported equipment; (2) construction and improvements, including public works, railroads, private building, and agricultural improvements, and (3) changes in the stock of cattle. Consumer durable goods and changes in inventories, other than the stock of cattle, are excluded. In addition, it was believed, by the author, that the estimates probably underestimated (*a*) some types of durable equipment, such as tools and office furniture, (*b*) some types of investment in public services, such as trolley lines and telephones, and (*c*) some types of construction activity and improvements, such as mines. It may thus be inferred that the estimates of gross investment here used probably understate the level of investment in Argentina.

The gross investment series, expressed in current prices, was deflated through the use of the implicit gross product deflator, for the years since 1935, and a cost-of-living index for earlier years. The latter is taken from an unpublished study, *Argentine Business Cycles, 1900–1950*, by Francisco García Olano and César H. Belaúnde, Buenos Aires, Argentina.

For the method of estimating gross investment, by major activity sector, see the note to table 27.

(2) *Stock of capital*

The stock of capital estimates are by United Nations ECLA, based on combining the gross investment estimates of Belaúnde, by activity sector, and by type of good, less depreciation, with census benchmark estimates of the stock of capital. As here used, the stock of capital is defined as the depreciated replacement value (in 1950 prices) of reproducible tangible and durable capital goods. Land, consumer durable goods, inventories other than cattle, and monetary metal are excluded from the stock of capital.

The main census benchmark sources for estimates of the stock of capital are as follows:

a. The "Census of 1914" provided a benchmark estimate of the value of agricultural improvements (*instalaciones rurales fijas*), agricultural machinery (*maquinaria y útiles agrícolas*), and the stock of cattle (*ganado*);

b. The study *Riqueza y renta de la Argentina; su distribución y su capacidad contributiva*, by Alejandro E. Bunge, Buenos Aires, Argentina, 1917, provided a benchmark estimate of the value of producers' durable equipment in industry (*maquinaria industrial y útiles de trabajo*) and buildings (*edificación*);

c. An estimate of the value of railroads, including rolling stock, equipment, construction and major improvements, made in 1911 by the ex-Director General of Railroads, provided a benchmark estimate of the capital stock in railroads.

d. The Census of Industry in 1935, which reported the value of the stock of capital, was used as a check on the validity of the estimate of the stock of capital in industry. The difference between the two estimates, when adjusted for prices and comparability of coverage, was negligible.

e. The Census of Industry in 1946, which reported the value of the stock of capital, at original cost, was not used for two main reasons. One was the multiplicity of valuation problems inherent in distributing original cost valuations, by year of origin. The other involved the problem of expressing values in terms of a common price-level, especially in view of the price increases recorded in the decade prior to 1946.

Capital stock sectors, for which no comprehensive universal measures were available, include imported vehicles, and public works. The value of the stock of capital for these groups was estimated for a base year by cumulating gross investment, in 1950 prices, beginning with the year 1900, for a number of years equivalent to one-half of the estimated useful life of the capital good. For a theoretical discussion of the methodology here used, see Goldsmith, *The Growth of Reproducible Wealth of the United States of America from 1805 to 1950, op. cit.*

The estimates of the stock of capital for benchmark years, by sector and by type of capital good were extended year by year, by means of net annual investment series by sector, and by type of capital good. The net investment series were derived by subtracting from the gross investment series, year by year, the estimated real depreciation of the stock of capital, by sector and by type of capital good, in accordance with the estimated useful life of each type of capital good.

The method of estimating the composition of the stock of capital, by main activities and the assumptions on the length of useful life of each type of capital good, are discussed in the note to table 27.

Col. (7): Col. (5) divided by col. (6).

Col. (8): Col. (5) divided by the estimated active population. For 1947, the active population data are from the population census of that year; see *IV Censo General de la Nación, 1947, Resultados Generales del Censo de Población, Informe D.1*, Presidencia de la Nación, Ministerio de Asuntos Técnicos, Dirección General del Servicio Estadístico Nacional, Buenos Aires, Argentina, 1951.

For other years, the active population was estimated by the United Nations Economic Commission for Latin America.

3. Capital accumulation and productivity

It is now necessary to consider the factors which determined the increase and subsequent decrease of output. During the period of expansion of the gross product, the high rate of capital accumulation was associated with an increase in the output-capital ratio. During the subsequent recession, the rate of capital accumulation fell and the output-capital ratio declined even further.

It is preferable to start by considering the changes in the rates. Between 1945 and 1948 capital stock expanded at an annual rate of 5.2 per cent, although this exceptionally high level was not maintained for long. Indeed, it declined to 2.7 per cent in 1952. Throughout the years 1945-52, capital stock in Argentina increased by 39.2 per cent, and capital per worker rose from an average of 19,000 pesos in 1945 to some 22,000 pesos in 1952.

This aspect of recent Argentine development may best be observed in the second chart at the top of plate 11. This chart also shows the fluctuations of the output-capital ratio. The rise in this ratio, until 1948, was probably due to the exceptional expansion of demand which facilitated a relatively full utilization of capital stock, even though there had been considerable new investment. Later, the drop in agricultural output tended to lower demand and output in other activities, so that productive capacity was used to a lesser extent. This is undoubtedly the main reason for the downward trend of the output-capital ratio, although other factors may well have been involved.

4. AVAILABLE GOODS AND SERVICES, CONSUMPTION AND INVESTMENT

The general trend of available goods and services resembles that of the gross product, but they were not exactly identical. The first chart of plate 11 shows that available goods and services increased at a greater rate than did the gross product in the favourable years, while they deteriorated less during the recent decline. The explanation for this lies in the changing role of the external trade sector, in accordance with important measures taken by the government. Whereas Argentina formerly required an export surplus to offset remittances of profits and interest due to foreign capital, this item has now been reduced to a relatively small amount as a consequence of the repurchase of foreign-owned capital between 1945 and 1948. In addition to this considerable improvement in the geographic balance of payments, during the past two years Argentina has made substantial use of its monetary reserves and compensatory external short-term credits, to allow for an appreciable import surplus. These trends are carefully detailed in tables 22, 23 and 24, similar to those used in commenting on Latin America as a whole. From these tables, it may be seen that the available volume of goods and services in 1952 (50,100 million pesos) exceeded the gross product by 1,600 millions.

In this way, the sharp fall in the gross product during 1951 and 1952 was partly offset by the relative maintenance of the level of available goods and services which enabled consumption to remain as high as in 1950. The substantial reduction of investment also contributed to this result. It is evident that investment is more vulnerable than consumption to fluctuations in the gross product. In the years of prosperity, investment improved more than consumption, rising from 16.6 per cent of available goods and services in 1945 to the exceptional rate of 20.2 per cent in 1948, only to fall subsequently to 15.4 per cent in 1952.

5. THE GROSS PRODUCT AND PER CAPITA CONSUMPTION

An attempt will now be made to sketch in the over-all picture of recent trends, in terms of per capita rates of development. For this purpose it is convenient to divide the seven years into two periods, as shown in table 21:

Attention should be drawn to the extraordinary development between 1945 and 1948, in contrast to the subsequent period, 1948-52. It is remarkable that in the earlier period an annual rate of increase of 12.6 per cent was achieved in per capita consumption; output, conversely, rose by only 6.4 per cent, despite the exceptional expansion of investment. These phenomena were possible as a result of the improvement in the terms of trade which contributed to a larger growth in the gross product than in output. The smaller export surplus also contributed to this result, increasing the rate of available goods and services more than that of the gross product. This decrease in the export surplus resulted from the reduced requirements for remittances of profits and interest, referred to above, and from the drawing down of monetary reserves accumulated previously. This may be seen from table 22.

Table 21. Cumulative per capita rates of change in Argentina, 1945–52

Percentages

	1945–48	*1948–52*	*1945–52*
Gross product	10.2	−5.6	0.2
Output	6.4	−3.6	0.3
Available goods and services	14.3	−5.2	2.2
Consumption	12.6	−4.1	2.3
Investment	22.3	−9.0	1.1

Sources and methods

Cumulative percentage rates of change based on table 20, cols. (1), (2) and (5), and table 25, cols. (6), (7) and (8).

Between 1948 and 1952, external factors, or those associated with them, also accounted for per capita consumption declining at an annual rate of 4.1 per cent, while output averaged a 3.6 per cent fall each year. It should also be noted that the relatively sharper decline of investment favoured consumption.

In effect, therefore, these external factors accentuated the rates of growth during the earlier post-war years, as later they tended to reduce the extent of the decline. They thus contributed to an increase of per capita consumption, between 1945 and 1952, of 2.3 per cent annually, even though output rose at a rate of less than 0.3 per cent per capita.

In any event, the period 1945-48 was exceptional and it is hardly probable that the factors which determined these high rates of expansion will recur in the near future. It is probably due to these considerations that the second five-year plan assumes an annual rate of expansion of only 3.6 per cent until 1957.

6. THE CAPACITY FOR EXTERNAL PAYMENTS, THE CAPACITY TO IMPORT AND INVESTMENTS

The general comments made in chapter I, concerning the close relationship between the capacity for external payments and investments, are also applicable to Argentina. The fluctuations of the capacity for external payment indicated on the first chart of plate 12 (tables 23 and 24) may now be studied. In Argentina, the capacity to import was influenced solely by the volume of exports and the effect of the terms of trade, since the inflow of foreign capital was negligible. From a total of 6,600 million pesos in 1945, the capacity for external payments rose to 11,500 million in 1947, only to drop to about 4,050 million in 1952. During the period of expansion, the improvement was mainly due to the terms of trade, which accounted for the equivalent of 53.8 per cent of the capacity for external payments in 1947. In 1952, the capacity for external payments fell to a low figure, following the sharp downward trend in exports.

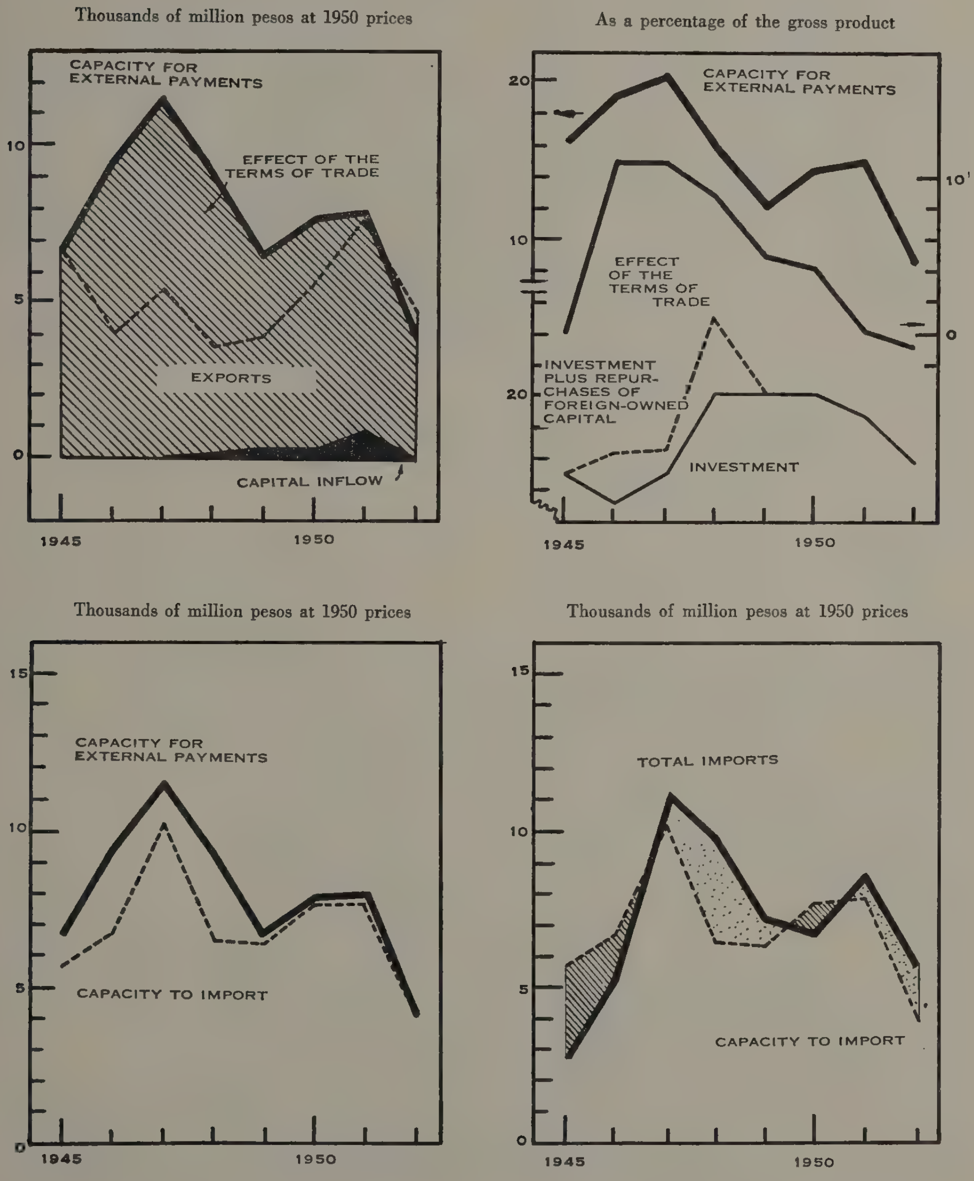
The second chart at the top of plate 12 shows the relationship between the capacity for external payments and investment. The rates of investment and of external payments generally followed the same trend as the gross product. However, it is surprising to note that the downward movement after 1948 was much more pronounced in the case of the capacity for external payments. Two other factors must be introduced in order to explain this phenomenon, namely, the repurchase of foreign-owned capital and the use of monetary reserves and compensatory external short-term credits by the monetary authorities.

If the sum of the foreign repurchases is added to the curve of investments, it will be found that the trend of the latter rate follows that of the capacity for external pay-

Plate 12

CAPACITY FOR EXTERNAL PAYMENTS AND CAPACITY TO IMPORT, AND THEIR INFLUENCE ON INVESTMENTS AND IMPORTS, IN ARGENTINA, 1945-52

(Natural scale)



Thousands of million pesos at 1950 prices

As a percentage of the gross product

Thousands of million pesos at 1950 prices

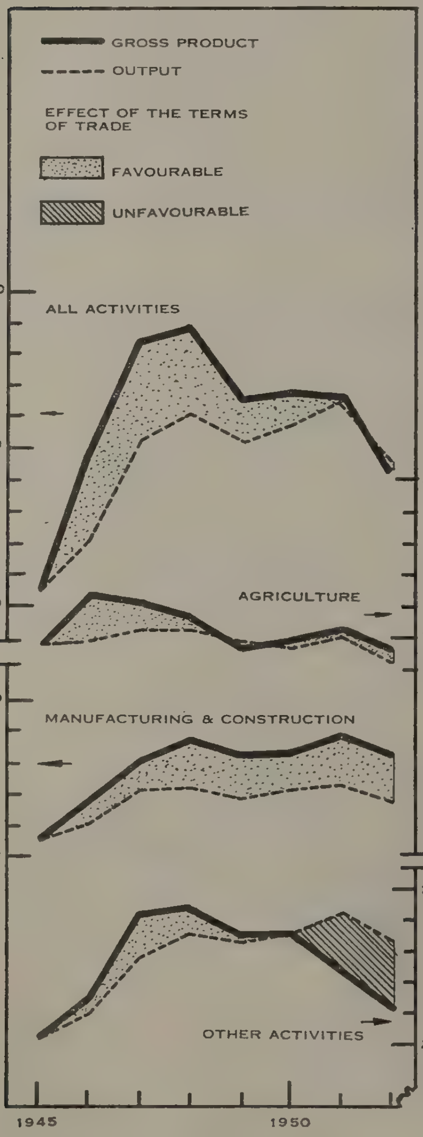
Thousands of million pesos at 1950 prices

Plate 13

GROSS PRODUCT, OUTPUT AND THE TERMS OF TRADE, BY ACTIVITIES, IN ARGENTINA, 1945-52

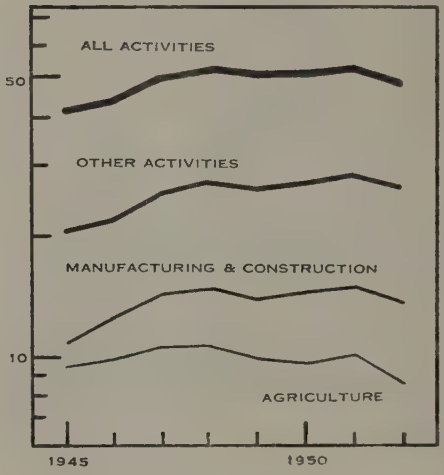
Gross product and output

Thousands of million pesos at 1950 prices
(Natural scale)



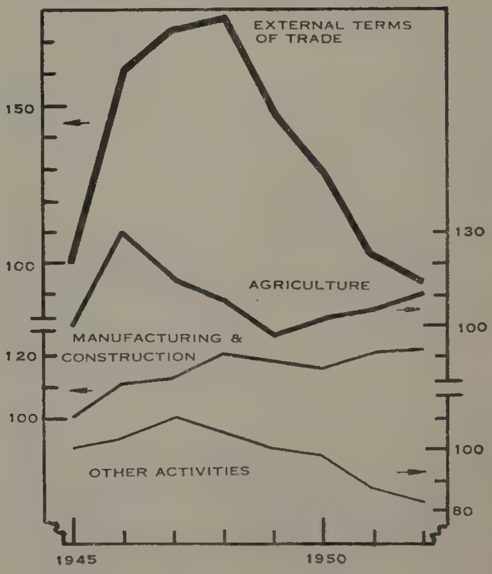
Output

Thousands of million pesos at 1950 prices
(Semi-logarithmic scale)



Indices of relative prices

1945 = 100
(Natural scale)



nents more closely. This should be borne in mind when valuating the strength of Argentine investment during his period, since the resources used in repurchasing oreign-owned capital might also have been employed for ew capital investment.

The influence of compensatory external short-term redits contracted by the monetary authorities upon the ifference between the coefficients of capacity and investment, is apparent. Had monetary reserves and such ompensatory loans (amounting to 652 million pesos in 951 and approximately 1,673 million pesos in 1952) ot been used, investment would undoubtedly not have ttained the level of 10,000 and 7,700 millions respecively for these two years. This largely explains how a harp decline in the rate of capacity relative to the gross roduct (from 16.1 per cent in 1945 to 8.2 per cent in 952) coincided with a slight improvement in the rate f investment—that is, from 14.9 per cent to 15.9 per cent—over this period. However, this factor is unlikely to continue. As a result, the future rate of investment will depend mainly on the recovery of exports and on tendencies in the terms of trade, assuming that the flow of foreign capital remains at its present low level.

Two facts should be emphasized in relation to the capacity to import and imports. The first is stressed in the third chart of the plate. During the past four years, the capacity to import closely matched the capacity for external payments, since remittances were practically eliminated as a result of substantial repurchases of foreign-owned capital. Some remittances must still be made, but in the past few years these have been limited by the severity of official exchange restrictions. The second fact concerns the difference between imports and the capacity to import. With the exception of 1945, 1946 and 1950, imports were greater than the capacity to import, as indicated in the fourth chart. This was achieved

Table 22. Movements of external payments which tend to increase or decrease available goods and services, in Argentina 1945–52

(Millions of pesos at 1950 prices)

A. Factors which tend to increase available goods and services

Years	*Inflow of foreign capital* Capital (1)	Imports of capital in the form of goods (2)	Total (3)	Decrease of official monetary reserves and official short term credits (4)	Total (5)
1945	–	–	–	–	–
1946	–	–	–	–	–
1947	–	–	–	2,018	2,018
1948	38	–	38	2,024	2,062
1949	70	180	250	238	488
1950	44	252	296	–	296
1951	856		856	652	1,508
1952		..	..	1,673	1,673

B. Factors which tend to decrease available goods and services / *C. Net results*

Years	Remittance of profits and interest (6)	Repurchase of foreign-owned capital (7)	Increase of official monetary reserves and decline in official short-term credits (8)	Outflow of long-term and short-term capital (9)	Total (10)	Factors of increase (11)	Factors of decrease (12)	Errors and omissions in the total geographic balance of payments (13)	The capital accounts of the geographic balance of payments which covers excess of imports or exports (–) (14)
1945	944	15	2,880	279	4,118	–	4,118	154	–3,964
1946	1,012	1,737	537	741	4,027	–	4,027	–198	–4,225
1947	561	766	–	274	1,601	2,018	1,601	–775	–358
1948	51	2,740	–	–	2,791	2,062	2,791	1,201	472
1949	65	19	–	–	84	488	84	427	831
1950	19	–	542	–	561	296	561	–466	–724
1951	163	23	–	–	186	1,508	186	156	1,478
1952	..	–	–	–	–	1,673	–	–97	1,576

Sources and methods

See general note at the end of chapter I on the balance of payments

1945: *Balance of Payments 1939–45*, United Nations, New York, 1948.

1946–50: *Balance of Payments Yearbook*, International Monetary Fund.

1951–52: *Accounts of the Central Bank of Argentina*, Review of the River Plate; *Memoria Anual, 1951*, Banco Central de la República Argentina; and *International Financial Statistics*, International Monetary Fund.

For definitions and coverage of the column headings, see *Balance of Payments Yearbook*, International Monetary Fund, vols. 3 and 4.

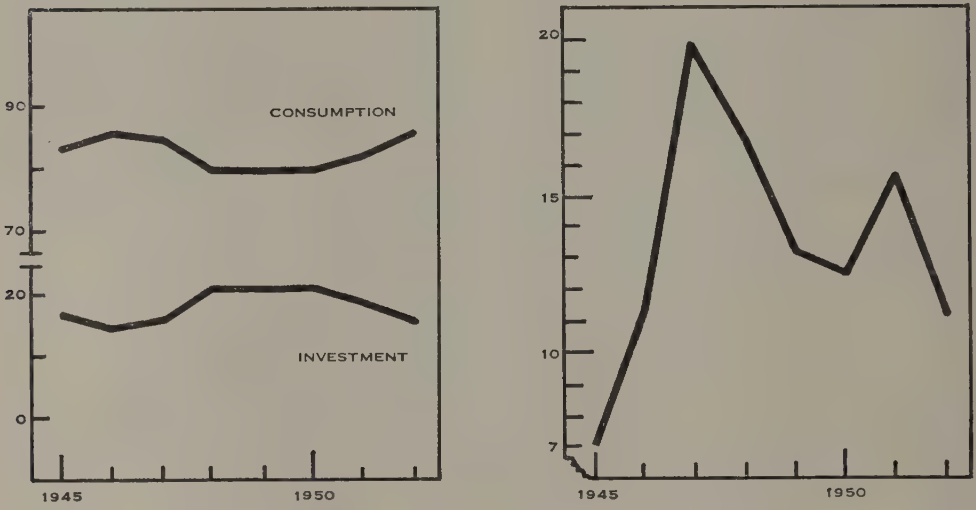
Col. (3): Totals obtained from *Memoria Anual, 1951*, Banco Central de la República Argentina, p. 22. Imports of capital in the form of goods (*sin uso de divisas*) comprise the difference between this total and the net credit figure reported as "private capital movements" in the *Balance of Payments Yearbook*, vol. 4, *op. cit.*

Col. (4): Comprises the totals included in the *Balance of Payments Yearbook* headings "changes in loans and short-term assets" and "changes in monetary gold". A U.S. Export-Import Bank credit is included in the total for 1951.

Plate 14

RELATIONSHIP BETWEEN AVAILABLE GOODS AND SERVICES, CONSUMPTION AND INVESTMENT, AND IMPORTS, IN ARGENTINA, 1945-52

(Natural scale)



Consumption and investment as a percentage of available goods and services

Imports as a percentage of available goods and services

Ratio of imports of capital goods and other goods to total imports

Imports of capital goods and other goods as a percentage of consumption and investment

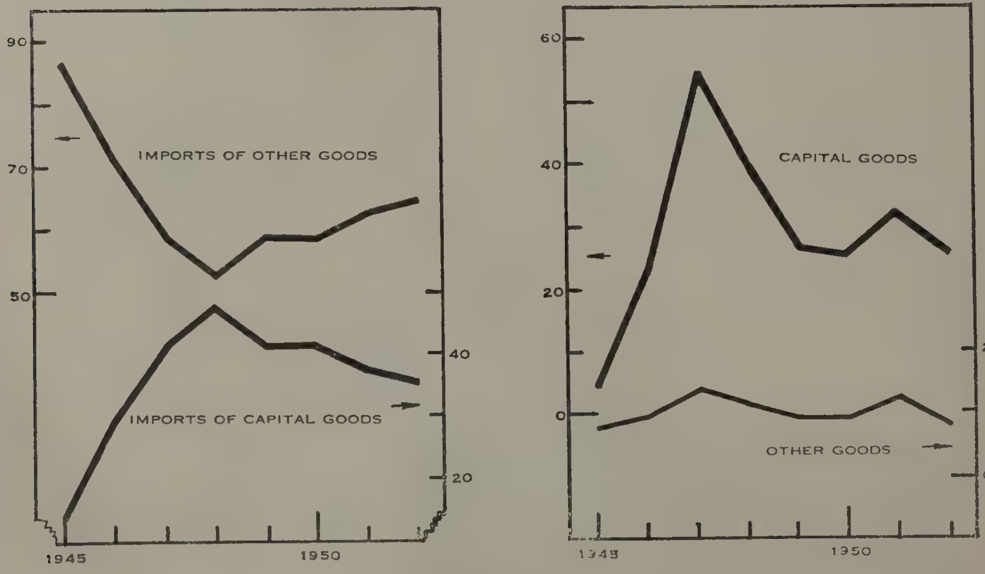


Table 23. Exports and imports of goods and services in Argentina, 1945–52

(Millions of pesos at 1950 prices)

Years	*Imports*				*Exports*				*Excess of imports or exports (−)* (9)
	Goods (1)	*Transport* (2)	*Other services* (3)	*Total* (4)	*Goods* (5)	*Transport* (6)	*Other services* (7)	*Total* (8)	
1945	2,149	377	123	2,649	6,056	467	90	6,613	−3,964
1946	4,335	763	137	5,235	8,873	520	67	9,460	−4,225
1947	9,216	1,628	349	11,193	11,044	507	–	11,551	−358
1948	8,090	1,430	256	9,776	8,984	320	–	9,304	472
1949	5,870	1,036	219	7,125	6,012	212	70	6,294	831
1950	5,601	989	151	6,741	7,358	113	–	7,465	−724
1951	7,132	1,257	204	8,593	6,853	180	82	7,115	1,478
1952	4,637	817	171	5,625	3,877	172	–	4,049	1,576

Sources and methods

See general note at the end of chapter I on the balance of payments.
For general sources, see notes to table 22.
Col. (1): Data converted from c.i.f. to f.o.b. basis by uniform deduction of 15 per cent.
Col. (2): Equivalent to the 15 per cent deduction from the c.i.f. import totals.
Col. (6): Net credit items reported in the *Balance of Payments Yearbook* under "Transportation account". Years 1945 and 1952 estimated by United Nations Economic Commission for Latin America.

y resorting to monetary reserves and compensatory ex-ernal short-term credits, as explained above.

During 1952, the excess of imports of goods and ervices over the capacity to import enabled Argentina o maintain a relatively high rate of imports in relation to vailable goods and services (11.2 per cent) as compared vith the position in 1945. This may clearly be observed n the second chart of plate 14 (table 25). In 1947, the rate f investment had reached almost 19.8 per cent, a level vhich had not been attained in Argentina for many ears.

. IMPORTS OF CAPITAL GOODS AND OTHER GOODS AND THEIR RELATIONSHIP TO THE GROSS PRODUCT

In the other three charts, attention should be drawn o some aspects of the import trend, as compared with he gross product. The rate of imports will be reviewed irst. Imports of capital goods, in relation to total investnent, still retained a fairly high rate in 1952 (26 per ent), compared with the beginning of the period. This explains why such imports still constituted such an appreciable proportion (35.4 per cent) of total imports in 1952. Conversely, the import rate for other goods, in relation to total consumption, hardly varied from the 10.1 per cent level recorded for the period 1945-52. This would appear to indicate that, during the period under review, Argentina was able to maintain a relatively moderate rate of imports in relation to consumption because of its industrial development and strict import controls. In effect, the tendency for certain imports to expand more than consumption was evidently offset by substituting other imports by domestic production. This does not apply to capital goods. Substitutions in this sector were inadequate to prevent the coefficient from rising. It is easy to understand the urge to provide greater incentives for the production of capital goods, beginning with the expansion of basic iron and steel industries. Structural changes of this nature seem essential, in order to re-establish a more stable rate of expansion in Argentina.

able 24. The gross product and available goods and services for consumption and investment, in Argentina, 1945–52

(Thousands of million pesos at 1950 prices)

Years	*Gross product* (1)	*Excess of imports or exports (−)* (2)	*Available goods and services* (3)
945	40.9	−4.0	36.9
946	49.7	−4.2	45.5
947	56.8	−0.4	56.4
948	57.9	0.5	58.4
949	53.1	0.8	53.9
950	53.7	−0.7	53.0
951	53.3	1.5	54.8
952	48.5	1.6	50.1

Sources and methods

Col. (1): Table 20, col. (2).
Col. (2): Table 23, col. (9).
Col. (3): Col. (1) plus col. (2).

8. INVESTMENT, OUTPUT AND PRODUCTIVITY BY ACTIVITIES

The reduction of agricultural output since 1948 and the deterioration in the terms of trade have exercised a dual influence. On the one hand, they affected general demand adversely and, on the other, they reduced the capacity for external payments, thereby depriving domestic activities of the increasing volume of imports essential for their continued growth. As noted above, in view of the fall in the capacity for external payments in 1952, the government was obliged to adopt deflationary credit, exchange controls and wage-price policies, in an effort to contract domestic demand. As a consequence, output and investment in manufacturing and other activities fell sharply.

Despite these limiting factors, which became even more intense in recent years, manufacturing has been able to maintain a large part of the gains achieved earlier. As seen in table 26, after a decline between 1948 and 1949, there was an ensuing rise until 1952, at which time the limiting factors already mentioned provoked a fall of 7.5 per cent. For the period 1945-52 as a whole, how-

Table 25. Available goods and services, consumption and investment in Argentina, 1945–52

(Pesos at 1950 prices)

Years	Total	Consumption	Investment	Ratio to the total: Consumption	Ratio to the total: Investment	Per capita: Available goods and services, total	Per capita: Consumption	Per capita: Investment
	(thousands of million pesos)			(percentage)		(pesos)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1945	36.9	30.8	6.1	83.4	16.6	2,396	2,000	396
1946	45.5	39.0	6.5	85.8	14.2	2,917	2,500	417
1947	56.4	47.8	8.6	84.8	15.2	3,547	3,006	541
1948	58.4	46.6	11.8	79.8	20.2	3,583	2,859	724
1949	53.9	43.0	10.9	79.8	20.2	3,228	2,575	653
1950	53.0	42.2	10.8	79.6	20.4	3,081	2,453	628
1951	54.8	44.8	10.0	81.8	18.2	3,114	2,545	568
1952	50.1	42.4	7.7	85.6	15.4	2,783	2,356	428

Sources and methods

Col. (1): Table 24, col. (3).
Col. (2): Col. (1) less col. (3). See general note at the end of chapter I.
Col. (3): See note to table 20.
Col. (4): Col. (2) as a percentage of col. (1).
Col. (5): Col. (3) as a percentage of col. (1).
Col. (6): Col. (1) divided by table 20, col. (1).
Col. (7): Col. (2) divided by table 20, col. (1).
Col. (8): Col. (3) divided by table 20, col. (1).

ever, the rate of growth in manufacturing output was 3.1 per cent annually. Agriculture, conversely, has experienced more adverse than favourable years, and, accentuated by the strong impact of the 1952 drought, agricultural output showed an annual rate of decline of 1.4 per cent between the years 1945 and 1952.

In other activities, the greatest increase was recorded in 1947, a rise of 16.5 per cent, due presumably to public works projects. Thereafter, the rate of growth declined and output in this sector fell in 1952, as a result of developments in agriculture and manufacturing.

It is clear that the growth of manufacturing industries was in many cases stimulated by the need to cover import deficiencies, widening its domestic market and overcoming depressive factors at least until 1951.

These fluctuations of output are naturally reflected in productivity. The output-capital ratio generally tended to drop. On the basis of existing data, it is impossible to ascertain to what extent this was caused by changes in the composition of investment. There can be no doubt, however, that the most important factor lies in the pressures which reduced the utilization of the growing productive capacity.

Table 26. Annual rates of change in output, by activities, in Argentina, 1945–52

(Percentages)

Years	Agriculture	Manufacturing	Other activities	All activities
1946	4.7	12.8	7.4	8.2
1947	7.7	15.2	16.5	14.2
1948	−0.6	1.3	5.8	3.2
1949	−7.3	−3.7	−1.3	−3.2
1950	−3.4	3.0	3.1	1.8
1951	5.9	2.5	3.0	3.4
1952	−15.2	−7.5	−5.8	−8.1
1945–52	−1.4	3.1	3.8	2.6

Sources and methods

Based on table 27, cols. (4) and (10).

The decline in the output-capital ratio after 1948 is striking, both in the sector of manufacturing and construction, as well as in the group of other activities, owing to the influence of the depressive factors. The same phenomenon is also reflected in output per worker.

The decrease in the output-capital ratio for agriculture has already been explained in this chapter. It is nevertheless of interest to note that the output per worker (excluding the poor harvest year of 1952) remained fairly stable, since the downward trend of output coincided with a similar tendency for the labour force employed therein.

The downward trend in the output-capital ratio, on the other hand, points to the disparity between capital accumulation and output. Plate 15 (table 27) will be used to analyse this aspect.

Capital has expanded continuously in the three groups of activities, although at different rates. In agriculture, investments were increased during the first four years of the period 1945-52 because of advantageous relative prices. Since 1949, however, the movement was reversed, with an accentuated decline in 1952. It is difficult to foresee the point at which these lower investments will affect the productive capacity of land in Argentina. However, it might be assumed that much greater capital will be required for agriculture in the future, in order to compensate for the recession in the last few years. Government plans for assisting farmers to purchase machinery, farm buildings and breeding stock are accordingly based upon this latter objective.

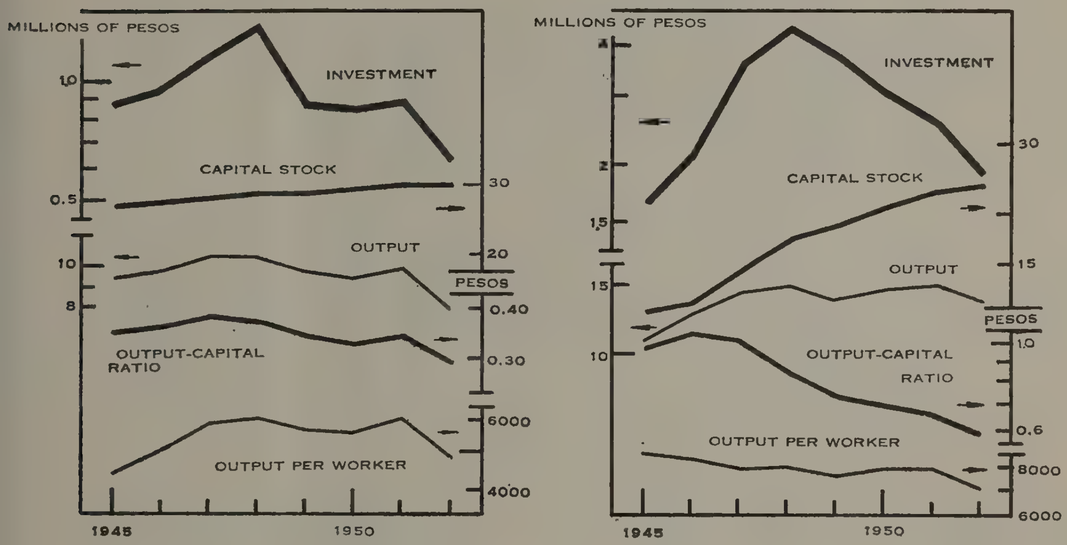
For manufacturing and construction there was a noticeable decline in investment after 1948, although the 1952 figure is considerably above the 1945 level. In other activities, the level of investment in 1952 was

Plate 15

INVESTMENT, CAPITAL STOCK, OUTPUT AND PRODUCTIVITY, BY ACTIVITIES, IN ARGENTINA, 1945-52

Pesos at 1950 prices
(Semi-logarithmic scale)

Agriculture *Manufacturing, mining and construction*



Transport, commerce, government and other services *Gross product by activities*

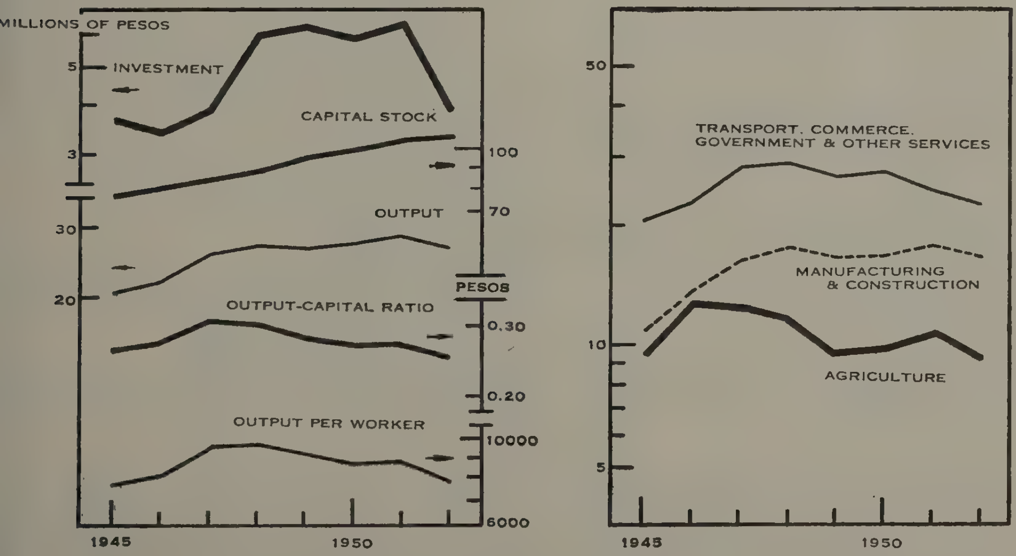


Table 27. Investment, capital stock, output and productivity, by activities, in Argentina, 1945–52

(Pesos at 1950 prices)

Years	Investment	Capital stock	Gross product	Output	Output		Investment	Capital stock	Gross product	Output	Output	
					Output-capital ratio	Output per worker (pesos)					Output-capital ratio	Output per worker (pesos)
	(millions of pesos)						(millions of pesos)					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	A. Total						*B. Agriculture*					
1945	6,158	115,974	40,945	40,945	.35	6,712	862	26,882	9,456	9,456	.35	4,467
1946	6,509	119,872	49,668	44,312	.37	7,147	944	27,331	12,864	9,900	.36	5,038
1947	8,664	125,895	56,800	50,586	.40	8,029	1,147	27,768	12,326	10,666	.38	5,942
1948	11,827	134,893	57,892	52,204	.39	8,157	1,384	28,382	11,463	10,600	.37	6,023
1949	10,929	142,723	53,144	50,542	.35	7,776	871	28,679	9,566	9,825	.34	5,663
1950	10,809	150,720	53,659	51,460	.34	7,680	850	29,045	9,712	9,494	.33	5,536
1951	10,045	157,330	53,355	53,210	.34	7,825	887	29,433	10,595	10,052	.34	6,059
1952	7,670	161,507	48,514	48,926	.30	6,891	663	29,667	9,373	8,529	.29	4,805
	C. Manufacturing and construction						*D. Transport, commerce, government and public utility services*					
1945	1,606	11,292	10,977	10,977	.97	8,450	3,690	77,800	20,512	20,512	.26	7,642
1946	2,121	12,075	13,758	12,382	1.02	8,227	3,444	80,466	23,046	22,030	.27	8,076
1947	3,561	14,317	16,131	14,259	1.00	7,944	3,956	83,810	28,343	25,661	.31	9,469
1948	4,408	17,190	17,541	14,446	.84	7,920	6,035	89,321	28,888	27,158	.30	9,644
1949	3,748	18,915	16,634	13,908	.73	7,563	6,310	95,129	26,944	26,809	.28	9,165
1950	4,045	20,710	16,688	14,325	.69	7,806	5,914	100,965	27,259	27,641	.27	8,778
1951	3,666	22,338	17,889	14,687	.66	7,825	5,492	105,559	24,871	28,471	.27	8,723
1952	2,899	23,272	16,660	13,589	.58	7,089	4,108	108,568	22,481	26,808	.25	7,866

Sources and methods

Cols. (1) and (7): See general note at the end of chapter I and the note to table 20, for a general description of the sources, methods, and concepts.

The estimates of gross investment, by type of investment, were grouped, by activity, as follows:

I. *Primary industries* (agriculture)
  a. Agricultural improvements.
  b. Agricultural machinery imports.
  c. Changes in the stock of cattle.
  d. Of the estimated domestic production of producers' durable equipment, the share attributed to primary industries was estimated to have increased from 10 per cent, in 1900, to 25 per cent, in 1952.

II. *Transforming industries* (manufacturing and construction)
  a. Of the estimated domestic production of producers' durable equipment the share attributed to the transforming industries was estimated to have increased from 10 per cent, in 1900 to 50 per cent in 1952.
  b. Imports of non-agricultural machinery (excluding imports of railroad equipment).
  c. One-half of the imports of vehicles.
  d. The share of building activity attributed to the transforming industries varied as follows:
    1900–40: 10 per cent;
    1941: 11 per cent;
    1942: 12 per cent;
    1943: 13 per cent;
    1944: 14 per cent;
    1945–52: 15 per cent.

III. *Service industries* (transport and communications, public utilities, commerce, and government)
  a. Imports of railroad equipment and materials plus construction activity and improvements.
  b. Public works.
  c. All building activity except that included in transforming industries.
  d. One-half the imports of vehicles.
  e. Domestic production of producers' durable equipment, except that attributed to primary industries and transforming industries.

Cols. (2) and (8): See general note at the end of chapter I and the note to table 20, for a general description of the sources, methods, and concepts.

The estimates of the stock of capital, by type of capital good, were grouped by activity, in the same manner as indicated in the notes to cols. (1) and (7).

The length of useful life assumptions which were used to estimate depreciation are as follows:

a. Agricultural improvements—50 years.
b. Agricultural machinery—20 years.
c. Producers' durable equipment (non-agricultural)—20 years.
d. Vehicles—20 years.
e. Buildings—50 years.
f. Railroad equipment, construction and improvements—33 years.
g. Public works—50 years.

Cols. (3), (4), (9) and (10): See the general note at the end of chapter I and the notes to tables 12 and 20 for a general description of the sources, methods and concepts.

Col. (5): Col. (4) divided by col. (2).

Col. (11): Col. (10) divided by col. (8).

Cols. (6) and (8): Cols. (4) and (10), respectively, divided by estimates of active persons, by main activity sectors. See note to table 20.

approximately the same as in 1945. Between the years 1945 and 1952, the highest rate of expansion of capital stock was that of manufacturing and construction, which rose at an annual rate of 0.9 per cent. This was followed by other activities, showing a rate of 4.9 per cent, and lastly by agriculture with 1.4 per cent.

9. RELATIVE PRICES, BY ACTIVITIES

The statistical material used for the preceding analyses was inadequate in some respects. As a result, interpretation of such data involves certain reservations, which also apply to the following remarks. Despite the lack of precision involved, it is useful to have a preliminary timate of the effect of relative prices, as carried out r Latin America as a whole.

In the case of Argentina, there are distinctive features the tendencies. Manufacturing was greatly favoured the remarkable improvement in the terms of trade ter 1945. This is readily observed in the first chart plate 13 (table 28). The gross product arising from manufacturing developed much more intensely than output, owing to the favourable trend of relative prices throughout the period.

A different phenomenon may be observed in agriculture, since after an exceptional period in 1946-47, relative prices caused a decline in the favourable effects to a point at which the margin between the gross product

Table 28. The gross product, output and relative prices, by activities, in Argentina, 1945–52

Years	Gross product (millions of pesos at 1950 prices)	Output (millions of pesos at 1950 prices)	Indices of relative prices 1945=100	Gross product (millions of pesos at 1950 prices)	Output (millions of pesos at 1950 prices)	Indices of relative prices 1945=100
	(1)	(2)	(3)	(4)	(5)	(6)
	A. All activities			*B. Agriculture*		
1945	40,945	40,945	100.0	9,456	9,456	100.0
1946	49,668	44,312	161.0	12,864	9,900	129.9
1947	56,800	50,586	174.0	12,326	10,666	115.6
1948	57,892	52,204	177.9	11,463	10,600	108.1
1949	53,144	50,542	148.0	9,566	9,825	97.4
1950	53,659	51,460	129.9	9,712	9,494	102.3
1951	53,355	53,210	102.6	10,595	10,052	105.4
1952	48,514	48,926	92.2	9,373	8,529	109.9
	C. Manufacturing and construction			*D. Other activities*		
1945	10,977	10,977	100.0	20,512	20,512	100.0
1946	13,758	12,382	111.1	23,046	22,030	104.6
1947	16,131	14,259	113.1	28,343	25,661	110.5
1948	17,541	14,446	121.4	28,888	27,158	106.4
1949	16,634	13,908	119.6	26,944	26,809	100.5
1950	16,688	14,325	116.5	27,259	27,641	98.6
1951	17,889	14,687	121.8	24,871	28,471	87.4
1952	16,660	13,589	122.6	22,481	26,808	83.8

Sources and methods

Cols. (1), (2), (4) and (5): Table 27.
Cols. (3) and (6): See note to table 12, col. (3).

Table 29. Total capacity for external payments and the capacity to import in Argentina, 1945–52

(Millions of pesos at 1950 prices)

Years	*A. Total capacity for external payments*					*B. Capacity to import*					
	Exports	Inflow of foreign capital	Total capacity for external payments	Effect of the terms of trade since 1945	Effect of the terms of trade as a percentage of total capacity	Total capacity for external payments	Remittances of profits and interest	Repurchase of foreign-owned capital	Capacity to import (6)−(7+8): Absolute figures	Capacity to import (6)−(7+8): As a percentage of total capacity	Imports of goods and services
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
45	6,613	–	6,613	–	–	6,613	944	15	5,654	85.5	2,649
46	9,460	–	9,460	5,356	56.6	9,460	1,012	1,737	6,711	70.9	5,235
47	11,551	–	11,551	6,214	53.8	11,551	561	766	10,224	88.5	11,193
48	9,304	38	9,342	5,688	60.9	9,342	51	2,740	6,551	70.1	9,776
49	6,294	250	6,544	2,602	39.8	6,544	65	19	6,460	98.7	7,125
50	7,465	296	7,761	2,199	28.3	7,761	19	–	7,742	99.8	6,741
51	7,115	856	7,971	145	1.8	7,971	163	23	7,785	97.7	8,593
52	4,049	..	4,049	−412	−10.2	4,049	..	–	4,049	100.0	5,625

Sources and methods

Col. (1): Table 23, col. (8).
Col. (2): Table 22, col. (3).
Col. (3): Col. (1) plus col. (2).
Col. (4): Table 20, col. (3).
Col. (5): Col. (4) as a percentage of col. (3).
Col. (6): Col. (3).
Col. (7): Table 22, col. (6).
Col. (8): Table 22, col. (7).
Col. (9): Col. (6) less cols. (7 + 8).
Col. (10): Col. (9) as a percentage of col. (6).
Col. (11): Table 23, col. (4).

and output disappeared completely. One factor, however, referred to in chapter I, is operative in this case, although its influence cannot yet be measured. A considerable proportion of the gross product, obtained during the period when the relative prices were favourable, did not remain in agriculture, by virtue of the price policy in force at the time. Agricultural income was transferred elsewhere through two main channels. Firstly, there was the direct effect of relatively low agricultural prices, which favoured consumption in other sectors. In this case, there was an appreciable transfer of the product to urban centres, where the impact of a policy of agricultural incentives (such as that described at the beginning of this chapter) must now inevitably fall. The second channel consisted of the transfer of the product by fiscal means. The substantial resources provided by the difference between foreign and domestic prices enabled the State to increase its expenditures and investment considerably. These in turn affected the distribution of the product arising from each sector of activity.

Table 30. The ratio of the capacity for external payments and investment to the gross product in Argentina, 1945–52

Years	*Capacity for external payments*	*Investment*	*Capacity for external payments*	*Investment*
	Absolute figures (thousands of million pesos at 1950 prices)		*As a percentage of the gross product*	
	(1)	(2)	(3)	(4)
1945.....	6.6	6.1	16.1	14.9
1946.....	9.5	6.5	19.1	13.1
1947.....	11.6	8.6	20.4	15.1
1948.....	9.3	11.8	16.1	20.4
1949.....	6.5	10.9	12.2	20.5
1950.....	7.8	10.8	14.5	20.1
1951.....	8.0	10.0	15.0	18.8
1952.....	4.0	7.7	8.2	15.9

Sources and methods

Col. (1): Table 29, col. (3).
Col. (2): Table 25, col. (3).
Col. (3): Col. (1) as a percentage of table 20, col. (2).
Col. (4): Col. (2) as a percentage of table 20, col. (2).

Table 31. Composition of imports in Argentina, 1945–52

Years	*Total imports*	*Consumer goods*	*Raw material*	*Fuels*	*Capital goods*	*Consumer goods*	*Raw material*	*Fuel*	*Capital goods*
	(millions of pesos at 1950 prices)					*(as a percentage of the total)*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1945...	2,649	1,036	1,070	191	352	39.1	40.4	7.2	13.3
1946...	5,235	1,575	1,482	660	1,518	30.1	28.3	12.6	29.0
1947...	11,193	3,123	2,496	907	4,667	27.9	22.3	8.1	41.7
1948...	9,776	1,828	2,219	1,095	4,634	18.7	22.7	11.2	47.4
1949...	7,125	1,104	2,138	933	2,950	15.5	30.0	13.1	41.4
1950...	6,741	802	1,989	1,153	2,797	11.9	29.5	17.1	41.5
1951...	8,593	1,057	2,896	1,435	3,205	12.3	33.7	16.7	37.3
1952...	5,625	664	1,530	1,440	1,991	11.8	27.2	25.6	35.4

Sources and methods

Col. (1): Table 23, col. (4).
Cols. (2), (3), (4) and (5): Col. (9) multiplied by cols. (6), (7), (8) and (9) respectively.
Cols. (6), (7), (8) and (9): Based on a tabulation of the quantum of imports in 1948 prices made by the United Nations Economic Commission for Latin America.

Table 32. Relative importance of imports with respect to investment, consumption and available goods and services, in Argentina, 1945–52

Years	*Ratio of capital goods to investment*	*Consumer goods*	*Raw material*	*Fuels*	*Ratio of total imports to available goods and services*
		(as a percentage of consumption)			
	(1)	(2)	(3)	(4)	(5)
1945..............	4.9	3.2	3.6	0.6	7.0
1946..............	23.1	4.1	3.8	1.8	11.4
1947..............	54.6	6.5	5.2	1.9	19.8
1948..............	39.0	3.9	4.7	2.4	16.8
1949..............	27.1	2.6	4.9	2.1	13.2
1950..............	25.9	1.9	4.7	2.6	12.6
1951..............	32.0	2.5	6.5	3.1	15.7
1952..............	26.0	1.6	3.5	3.3	11.2

Sources and methods

Col. (1): Table 31, col. (5) as a percentage of table 25, col. (3).
Cols. (2), (3) and (4): Table 31, cols. (2), (3) and (4), respectively, as a percentage of table 25, col. (2).
Col. (5): Table 31, col. (1) as a percentage of table 25, col. (1).

B. Brazil[3]

1. Periodic tensions in Brazilian growth

Because of its exceptionally high rate of growth, razil again faces one of the periodic tensions affecting s economy from time to time. There is a disequilibrium 1 its geographic balance of payments, the substantial icrease of fuel consumption and the consequences of ie rise in the gross product again having reduced the apacity to import. Furthermore, glancing at the doiestic sphere, it is evident that the transport system is carcely able to bear the growing pressure of the overoad and that it lacks the means to effect the necessary xtensions and improvements.

All such matters are of great concern to the governient. These tensions have nevertheless served to focus iterest on the critical points of development and to entralize efforts towards finding adequate solutions. The ecision to invest a substantial amount of domestic capital 1 petroleum reflects a strong current of opinion. At the ame time, with the participation of foreign capital, vast ansport and energy projects are being formulated, toether with others envisaging the establishment and xtension of basic industries. An Economic Development ank has been established to plan and implement the ivestment programme.

Since 1934, Brazil's gross product has increased at n annual rate of 5.6 per cent. The rate was even higher 1 recent years, and there are further prospects of coniderable acceleration. Thus, this institution was created t a time when the country had gained experience in the ynamics of growth towards centre. The bank will thus ave an opportunity to utilize this experience and to roject its doctrines into the future. As a result, it can ssist in preventing the reappearance of such tensions by ieans of far-sighted measures and careful planning of rowing investment, so as to strengthen and regulate ie rate of development.

2. The gross product and output

During the recent past, there has been a sharp expanion in Brazil's gross product. Between 1945 and 1952, ie rate of growth was 8 per cent annually. The ivourable trend of the terms of trade exercised a emarkable influence on the growth of Brazil's economy, oth by the direct effect on the gross product and inirectly through investment. Coffee prices have been rimarily responsible for these movements. It took many ears for this reaction to occur, since relative prices for offee had deteriorated seriously before the present e-establishment of the terms of trade which prevailed t the end of the twenties.

As in previous cases, a chart was prepared to demonrate the effect of the terms of trade. A glance at the rst chart of plate 16 (table 34) shows that between 945 and 1952 this effect involved a total of approxiiately 102,700 million cruzeiros at 1950 prices for razil, that is, an average of 6.6 per cent of its gross roduct. The maximum influence was observed in 1951 hen the effect accounted for 11.4 per cent of the gross roduct. By 1952, the proportion had dropped slightly, since the gross product continued to expand, whereas the effect of the terms of trade decreased somewhat.

Despite this recent downward tendency, it is estimated that in 1952 the favourable effect of the terms of trade enabled the gross product—equivalent to approximately 296,500 million cruzeiros at 1950 prices—to exceed output by about 24,600 million cruzeiros.

3. Capital accumulation and productivity

Owing to the terms of trade effect, the rate of growth of the gross product was somewhat higher than that of output. Nonetheless, the latter was quite appreciable, increasing annually by 6.6 per cent between 1945 and 1952. This increase was principally due to the rate of capital accumulation, which rose 4.2 per cent annually between the same years. The prevailing output-capital ratio also contributed to this increase as may be seen from the second chart on the same plate.

As a result of this accumulation, capital stock per worker rose to 37,296 cruzeiros in 1952, that is, an annual growth rate of 1.7 per cent between 1945 and 1952. This recovery of the output-capital ratio enabled the benefits of the increase in capital stock per worker to be transferred entirely in the form of an expansion of output. Output per worker thus improved by 4.1 per cent annually between 1945 and 1952. This rate is substantial, and gives an accurate indication of the increased productivity which may be obtained by raising the level of the capital stock per worker.

4. Available goods and services, consumption and investment

Available goods and services in Brazil during 1952 far surpassed the gross product, reaching a total of 310,000 million cruzeiros (table 34). This represented 13,500 million cruzeiros more than the gross product, which in turn exceeded output by 24,600 million cruzeiros, due to the effect of the terms of trade. The value of available goods and services was thus 38,100 million cruzeiros, or 14 per cent, higher than total output of goods and services, which figures may be regarded as exceptional.

This surplus of available goods and services over the gross product has no firm foundation. It results mainly from the intensive use, made by Brazil in 1952, of its monetary reserves and short-term external credits. These permitted the country to import a total volume of goods and services which outweighed exports by the aforesaid sum of 13,500 million cruzeiros. This process has been in operation since 1951, although on a smaller scale, since in that year the excess of imports over exports was only 6,800 million cruzeiros. The position in 1950 was the reverse, exports being higher than imports by some 5,400 million cruzeiros. Tables 35 and 36 show details of the geographic balance of payments, indicating the trend of exports and imports of goods and services. This probably explains why investment in 1952 remained at least as high as in 1951, even though Brazil's capacity for external payments had declined. The fourth chart on plate 16 shows the corresponding curves.

The growth of investment was quite remarkable. Whereas between 1945 and 1952 consumption grew at an annual rate of 8.2 per cent, investment attained a rate of 17.6 per cent annually. As in other Latin-American countries,

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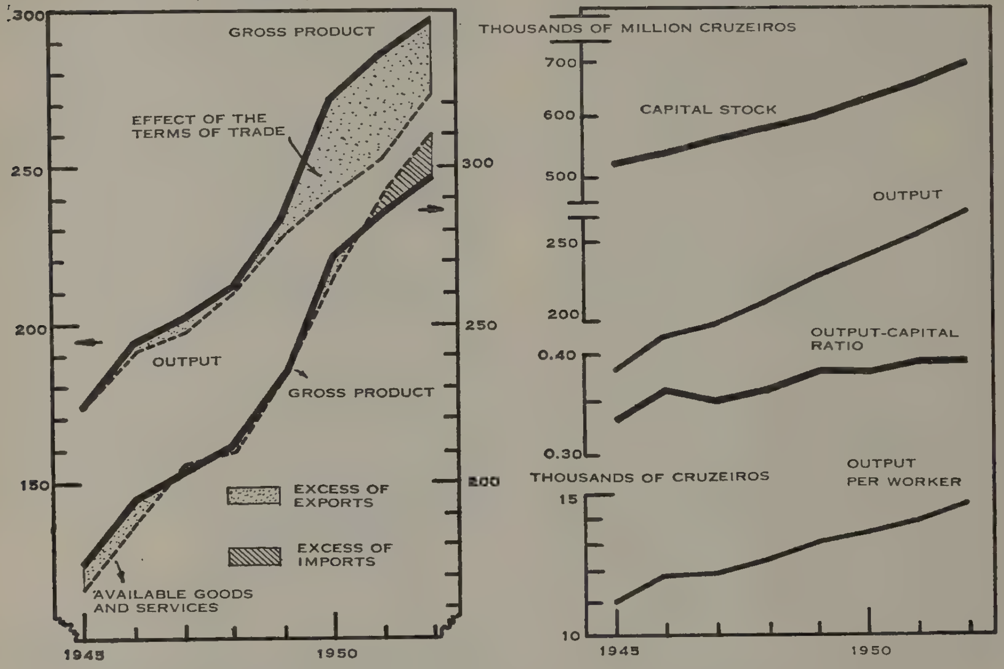
[3] The calculations made in this analysis were based on gross product data, valued in terms of cruzeiros at 1950 prices, that is to say, ll the gross product series are expressed in constant prices. In iis and other connexions, see the general note at the end of iapter I.

Plate 16

RECENT ECONOMIC DEVELOPMENT IN BRAZIL, 1945-52

Thousands of million cruzeiros at 1950 prices

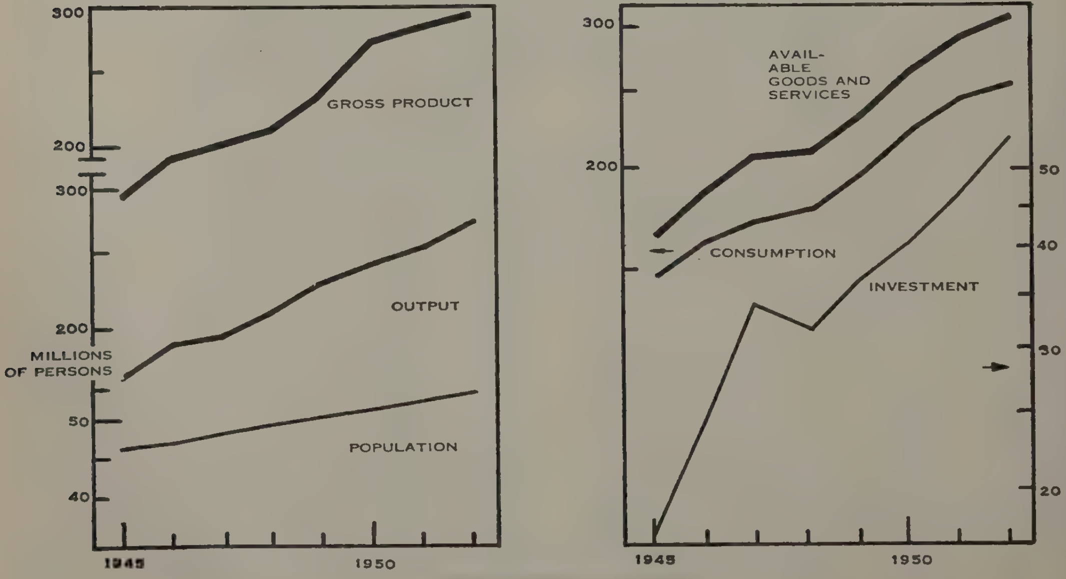


Gross product and available goods and services

(Natural scale)

Output, capital stock and productivity

(Semi-logarithmic scale)



Rate of growth of the gross product and of output

(Semi-logarithmic scale)

Available goods and services

(Semi-logarithmic scale)

Table 33. Population, gross product, output, capital and productivity in Brazil, 1945–52

(Cruzeiros at 1950 prices)

Years	Population	Gross product	Effect of the terms of trade since 1945		Output	Capital	Output	
							Output-capital ratio	Output per worker
	(in thousands)	(thousands of million cruzeiros)	(thousands of million cruzeiros)	(as a percentage of gross product)	(thousands of million cruzeiros)			(cruzeiros)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1945..........	46,285	173.4	–	–	173.4	520.1	0.33	11,019
1946..........	47,398	194.0	3.1	1.6	190.9	535.5	0.36	11,846
1947..........	48,537	202.1	4.7	2.3	197.4	557.7	0.35	11,962
1948..........	49,704	211.6	1.8	0.8	209.8	576.3	0.36	12,415
1949..........	50,900	232.7	5.6	2.4	227.1	599.0	0.38	13,123
1950..........	52,124	270.9	30.3	11.2	240.6	624.6	0.38	13,576
1951..........	53,377	285.5	32.6	11.4	252.9	655.0	0.39	13,935
1952..........	54,660	296.5	24.6	8.3	271.9	693.1	0.39	14,631

Sources and methods

Cols. (1), (2), (3), (5) and (6): See general note at the end of chapter I for sources, methods and concepts.

Col. (2): This column, based upon estimates of the gross product in current prices, is expressed in 1950 prices, and follows the methodology discussed in the general note at the end of chapter I, and in the note to table 12, col. (1). The gross product for Brazil is estimated as the sum of the net product at factor cost, by activity, plus depreciation and indirect business taxes. The estimates are by the United Nations Economic Commission for Latin America, and are based on the following main sources, in part:

a. For 1947–51, the estimates of the net product at factor-cost of the Getúlio Vargas Foundation (see *Revista Brasileira de Economia, ano 6, numero 4, Dezembro de 1952,* Rio de Janeiro, Brazil, "Estimativa da Renda Nacional do Brasil, 1947–51"), have been adjusted to include depreciation, indirect business taxes, and remittances of profits and interest. In addition, estimates of the net product at factor cost originating in manufacturing have been increased in accordance with a preliminary official, but unpublished, estimate by the Getúlio Vargas Foundation, on the basis of new data from the 1949 census of industry (see *Recenseamento Geral do Brasil, 1950, Sinopse Preliminar do Censo Industrial,* Conselho Nacional de Estatistica, Serviço Nacional de Recenseamento, Serviço Grafico do Instituto Brasileiro de Geografía e Estatistica, 1953).

b. An unpublished study made for the International Monetary Fund, in 1950, "Gross National Product of Brazil: estimates for 1940 through 1949", has been extensively revised by ECLA, in accordance with new census information, and the data, criteria, and methodology of the Getúlio Vargas Foundation.

c. Extensive work by ECLA, in estimating industrial and agricultural production in Brazil, has been utilized (see *Economic Survey of Latin America, 1949,* United Nations Economic Commission for Latin America).

d. Data for 1952 are preliminary and based in part on official but unpublished estimates of the net product at factor cost, by the Getúlio Vargas Foundation.

Col. (3): Based on an index of the terms of trade calculated by the United Nations Economic Commission for Latin America.

Col. (4): Col. (3) as a percentage of col. (2).

Col. (5): Based on a preliminary and unpublished study by the Getúlio Vargas Foundation, "Real Output and Income in Brazil, 1939–1951", July 1953. In this study, indexes of the real output of goods and services, by activity, are aggregated through the use of base-year gross product weights. See note to table 12, col. (2).

Col. (6): Estimates of the stock of capital are by the United Nations Economic Commission for Latin America, and are based principally on the extensive economic census of 1940 (*Recenseamento Geral do Brasil, 1940, Censos Economicos, Agrícola, Industrial, Comercial e dos Serviços,* Instituto Brasileiro de Geografía e Estatistica, 1950). A benchmark estimate of the stock of capital in 1940, expressed in 1950 prices, was extended year by year in combination with estimates of gross and net investment. See general note at the end of chapter I and the notes to tables 20 and 27 for a discussion of concepts and methods. Estimates of gross and net investment are by United Nations Economic Commission for Latin America, and are based in part on estimates of the Getúlio Vargas Foundation (see *Revista Brasileira, op. cit.,* "Estimativa do Investimento Bruto e Liquido no Brasil, 1947–1951"). The gross and net investment data cover fixed investment only, and were deflated by the implicit gross product deflator.

Col. (7): Col. (5) divided by col. (6).

Col. (8): Col. (5) divided by the estimated active population. The latter were based on the censuses of 1940 and 1950, *op. cit.*

Table 34. The gross product and available goods and services for consumption and investment, in Brazil, 1945–52

(Thousands of million cruzeiros at 1950 prices)

Years	*Gross product* (1)	*Excess of imports or exports (—)* (2)	*Available goods and services* (3)
1945........	173.4	−8.5	164.9
1946........	194.0	−7.7	186.3
1947........	202.1	3.2	205.3
1948........	211.6	−1.3	210.3
1949........	232.7	0.5	233.2
1950........	270.9	−5.4	265.5
1951........	285.5	6.8	292.3
1952........	296.5	13.5	310.0

Sources and methods

Col. (1): Table 33, col. (2).
Col. (2): Table 35, col. (9).
Col. (3): Col. (1) plus col. (2).

investment in Brazil was far more sensitive than consumption to the exceptional expansion of the gross product during the past few years.

5. THE EXPANSION OF THE GROSS PRODUCT AND PER CAPITA CONSUMPTION

It has been pointed out elsewhere that the rate of increase of output in Brazil was unusually high between 1945 and 1952, namely 6.6 per cent annually. As a consequence, despite the remarkable growth of the population, the per capita increment to output was considerable, that is, 4.1 per cent annually.

The growth in the volume of available goods and services per capita was even greater, or 6.9 per cent annually. This points to the beneficial influence exerted by external factors or those associated with them, referred to above, particularly to the effect of the terms of trade which enabled the rate of available goods and services to rise above that of output. Secondly, Brazil used its reserves and short-term credits, in addition to export earnings, to increase appreciably its volume of available goods, especially during the past two years.

These phenomena account for the fact that per capita consumption rose at an annual rate of 5.6 per cent, or appreciably more than the 4.1 per cent of output.

It is essential to bear in mind what has already been said with reference to Latin America as a whole. The factors responsible for the improvement in the rate of growth of available goods and services and of consumption (which was greater than that of the expansion of output) appear to have exhausted their effects, so that growth in the immediate future will depend on the degree of capital accumulation, and on the output-capital ratio.

The course of events during the past few years should be commented upon briefly in this connexion. The annual increment of 4.1 per cent in per capita output was obtained with an increase of only 1.7 per cent annually in the capital stock per worker. The remainder was provided by the increase in the output-capital ratio throughout 1945-52. After this improvement, it would be bold to base future estimates for a higher output merely on the assumption that the output-capital ratio will continue to rise, since the essential data for such a hypothesis are lacking. If the output-capital ratio were to be stabilized now, however, it would be necessary for the rate of capital accumulation to rise considerably above the level attained in 1947-52. Otherwise, Brazil would not be able to maintain during the next few years the high rate of expansion of consumption recorded during the recent past. (See tables 37 and 38.)

6. CAPACITY FOR EXTERNAL PAYMENTS, CAPACITY TO IMPORT AND INVESTMENTS

The ratio between the upward trend of investment and of the capacity for external payments should now be considered, starting with an analysis of that capacity and reference to the first chart on plate 17 (tables 39 and 40).

Brazil's capacity for external payments increased from about 23,200 million cruzeiros in 1945 to 35,900 millions in 1947. The latter figure approximated the 34,800

Table 35. Exports and imports of goods and services in Brazil, 1945–52

(Millions of cruzeiros at 1950 prices)

Years	*Imports*				*Exports*				*Excess of imports or exports (—)*
	Goods (1)	*Transport and insurance* (2)	*Other services* (3)	*Total* (4)	*Goods* (5)	*Transport and insurance* (6)	*Other services* (7)	*Total* (8)	(9)
1945............	13,045	489	–	13,535	22,078	–	–	22,078	−8,543
1946............	17,790	3,420	–	21,210	28,921	–	–	28,921	−7,711
1947............	28,364	5,325	3,016	36,705	31,435	978	1,059	33,472	3,233
1948............	22,915	5,146	2,383	30,444	30,013	912	785	31,710	−1,266
1949............	24,175	3,727	2,323	30,225	28,082	919	715	29,715	510
1950............	23,350	3,675	2,675	29,700	33,975	450	625	35,050	−5,350
1951............	39,413	6,253	3,520	49,185	41,011	486	926	42,423	6,762
1952............	38,661	5,932	2,636	47,229	32,184	795	727	33,706	13,523

Sources and methods

1945–46: Estimated primarily on the basis of the *Economic Survey of Latin America, 1948*, United Nations Economic Commission for Latin America.

1947–51: *Balance of Payments Yearbook*, International Monetary Fund; totals for 1951 based partly on unpublished official data.

1952: Based on unpublished official data.

For definitions and coverage of the column headings, see *Balance of Payments Yearbook*, International Monetary Fund, volumes 3 and 4.

Cols. (1) and (5): Computed on an f.o.b. basis. Exports include non-monetary gold.

Cols. (2) and (6): Gross totals as published in the *Balance of Payments Yearbook*, for 1947–50. For 1945 and 1946, debits were estimated as 15 per cent of imports c.i.f., and credits were estimated from partial data.

Cols. (3) and (7): Principally foreign travel and government.

Table 36. Movements of external payments which tend to increase or decrease available goods and services in Brazil, 1945–52

(Millions of cruzeiros at 1950 prices)

A. Factors which tend to increase available goods and services

Years	*Inflow of foreign capital*					*Decrease in official monetary reserves* (6)	*Official short-term credits* (7)	*Total* (8)
	Direct long-term (1)	*Other private long-term* (2)	*Short-term* (3)	*Special official financing* (4)	*Total* (5)			
1945	326	..	..	782	1,108	–	..	1,108
1946	960	..	..	510	1,470	–	..	1,470
1947	1,413	–	136	869	2,418	–	8,640	11,058
1948	1,673	–	658	254	2,585	1,699	–	4,284
1949	1,021	–	51	1,046	2,118	–	1,174	3,292
1950	775	–	150	725	1,650	750	–	2,400
1951	–	–	..	879	879	6,599	1,296	8,776
1952	227	–	68	795	1,090	2,273	12,842	16,205

B. Factors which tend to decrease available goods and services

Years	*Outflow of foreign capital*					*Remittances of profits and interest* (14)	*Increase in official monetary reserves* (15)	*Decrease in official short-term credits* (16)	*Total* (17)
	Repurchase of foreign investment (9)	*Repayment of official loans* (10)	*Other long-term capital* (11)	*Short-term capital* (12)	*Total* (13)				
1945	..	782	..	..	782	1,305	1,174	..	3,261
1946	..	629	..	..	629	1,500	2,820	..	4,949
1947	516	951	353	–	1,820	1,413	3,668	–	6,901
1948	1,420	1,977	178	178	3,753	2,611	–	178	6,542
1949	485	740	–	358	1,583	2,501	868	–	4,952
1950	75	2,400	225	275	2,975	2,400	–	1,975	7,350
1951	671	602	232	..	1,505	1,968	–	–	3,473
1952	–	773	–	–	773	841	–	–	1,614

C. Net results

Years	*Factors of increase* (18)	*Factors of decrease* (19)	*Errors and omissions* (20)	*The capital account of the geographic balance of payments which covers excess of imports and exports (–)* (21)
1945	1,108	3,261	–4,206	–8,543
1946	1,470	4,949	–5,101	–7,711
1947	11,058	6,901	–924	3,233
1948	4,284	6,542	992	–1,266
1949	3,292	4,952	2,170	510
1950	2,400	7,350	–400	–5,350
1951	8,776	3,473	1,459	6,762
1952	16,205	1,614	–1,068	13,523

Sources and methods

See general note at the end of chapter I on the balance of payments.

For general sources, see notes to table 35.

Col. (1): Estimates for 1945 and 1946 based upon United States direct investment and reinvested earnings data published by the United States Department of Commerce.

Col. (3): Mainly short-term claims on the United States and movements in cruzeiro balances.

Col. (4): Totals for 1945 and 1946 estimated on the basis of partial data.

Col. (7): Includes United States Stabilization Fund loans; changes in the use of payments and clearing arrangement funds; use of International Monetary Fund resources; and deferred payments on imports.

Col. (9): Primarily repurchase of British investments. Also includes small French debt settlement in 1947.

Col. (10): Estimates for the years 1945 and 1946 include primarily public sterling and dollar debt settlements, plus transactions with the United States Export-Import Bank. For 1947, United Nations Relief and Rehabilitation Agency grants are included. For 1948, gold and dollar subscriptions to the International Monetary Fund and the International Bank for Reconstruction and Development are included.

Col. (15): Totals for 1945 and 1946 are estimated from *International Financial Statistics*, International Monetary Fund.

Col. (20): Large errors and omissions for the years 1945 and 1946 possibly indicate an under-estimation of the factors of decrease. Lack of data on blocked sterling balances may contribute to an unduly conservative total for increases in reserves.

Table 37. Available goods and services, consumption and investment in Brazil, 1945–52

(Cruzeiros at 1950 prices)

Years	Total	Consumption	Investment	Ratio to the total: Consumption	Ratio to the total: Investment	Per capita: Total available goods and services	Per capita: Consumption	Per capita: Investment
	(thousands of millions of cruzeiros at 1950 prices)			(percentage)		(cruzeiros)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1945	164.9	147.4	17.5	89.4	10.6	3,562	3,184	378
1946	186.3	162.3	24.0	87.1	12.9	3,930	3,424	506
1947	205.3	171.5	33.8	83.5	16.5	4,230	3,533	696
1948	210.3	178.7	31.6	85.0	15.0	4,231	3,595	636
1949	233.2	197.0	36.2	84.5	15.5	4,582	3,870	711
1950	265.5	225.2	40.3	84.8	15.2	5,094	4,319	775
1951	292.3	245.6	46.7	84.0	16.0	5,476	4,601	875
1952	310.0	255.5	54.5	82.4	17.6	5,671	4,674	997

Sources and methods

Col. (1): Table 34, col. (3).
Col. (2): Col. (1) less col. (3).
Col. (3): See note to table 33, col. (6).
Col. (4): Col. (2) as a percentage of col. (1).
Col. (5): Col. (3) as a percentage of col. (1).
Col. (6): Col. (1) divided by table 33, col. (1).
Col. (7): Col. (2) divided by table 33, col. (1).
Col. (8): Col. (3) divided by table 33, col. (1).

Table 38. Annual rate of fluctuation of available goods and services, consumption and investment, in Brazil, 1945–52

(Percentages)

Years	Total available goods and services (1)	Consumption (2)	Investment (3)
Average 1945–52	9.4	8.1	17.6
1951	10.1	9.1	15.6
1952	6.0	4.0	16.7

Sources and methods

Based on table 37.
1945–52: Cumulative percentage rates of change.

millions attained in 1952, although in 1951 it had risen to 43,300 millions. The fact that the capacity for external payments has returned to its 1947 level is largely due to the unusual improvement in the terms of trade, as compared with 1945, since exports have declined in the meantime. In 1952, the effect of this improvement amounted to 24,600 million cruzeiros, as already indicated, and constituted an equivalent of 70.7 per cent of the total capacity for external payments. On the other hand, the quantum of exports fell, as compared with 1947. This decline is explained in part II. For the present, it is sufficient to indicate that the sharp increment between 1945 and 1947 must be ascribed to the liquidation of stocks accumulated throughout the war years, especially coffee and cotton. During the ensuing years, coffee exports have not yet been able to reflect the expansions in newly

Table 39. Total capacity for external payments and capacity to import in Brazil, 1945–52

(Thousands of millions of cruzeiros at 1950 prices)

Years	Exports	Inflow of foreign capital	Total capacity for external payments	Effect of the terms of trade since 1945: Absolute figures	Effect of the terms of trade since 1945: As a percentage of the total capacity	Total capacity for external payments	Remittances of profits and interest	Outflow of foreign capital	Capacity to import (6) − (7+8): Absolute figures	Capacity to import: As a percentage of the total capacity	Capacity to import: As a percentage of the gross product	Imports of goods and services
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1945	22.1	1.1	23.2	–	–	23.2	1.3	0.8	21.1	90.9	12.2	13.5
1946	28.9	1.5	30.4	3.1	9.6	30.4	1.5	0.6	28.3	93.9	14.6	21.2
1947	33.5	2.4	35.9	4.7	13.1	35.9	1.4	1.8	32.7	91.1	16.2	36.7
1948	31.7	2.6	34.3	1.8	5.2	34.3	2.6	3.8	27.9	31.3	13.2	30.4
1949	29.7	2.1	31.8	5.6	17.6	31.8	2.5	1.6	27.7	87.1	11.9	30.2
1950	35.0	1.6	36.6	30.3	82.8	36.6	2.4	3.0	31.2	85.2	11.5	29.7
1951	42.4	0.9	43.3	32.6	75.3	43.3	2.0	1.5	39.8	91.9	13.9	49.2
1952	33.7	1.1	34.8	24.6	70.7	34.8	0.8	0.8	33.2	95.4	11.2	47.2

Sources and methods

Col. (1): Table 35, col. (8).
Col. (2): Table 36, col. (5).
Col. (3): Col. (1) plus col. (2).
Col. (4): Table 33, col. (3).
Col. (5): Col. (4) as a percentage of col. (3).
Col. (6): Col. (3).
Col. (7): Table 36, col. (14).
Col. (8): Table 36, col. (13).
Col. (9): Col. (6) less cols. (7) plus (8).
Col. (10): Col. (9) as a percentage of col. (6).
Col. (11): Col. (9) as a percentage of table 33, col. (2).
Col. (12): Table 35, col. (4).

Plate 17

CAPACITY FOR EXTERNAL PAYMENTS AND CAPACITY TO IMPORT, AND THEIR INFLUENCE ON INVESTMENT AND IMPORTS, IN CHILE, 1945-52

(Natural scale)

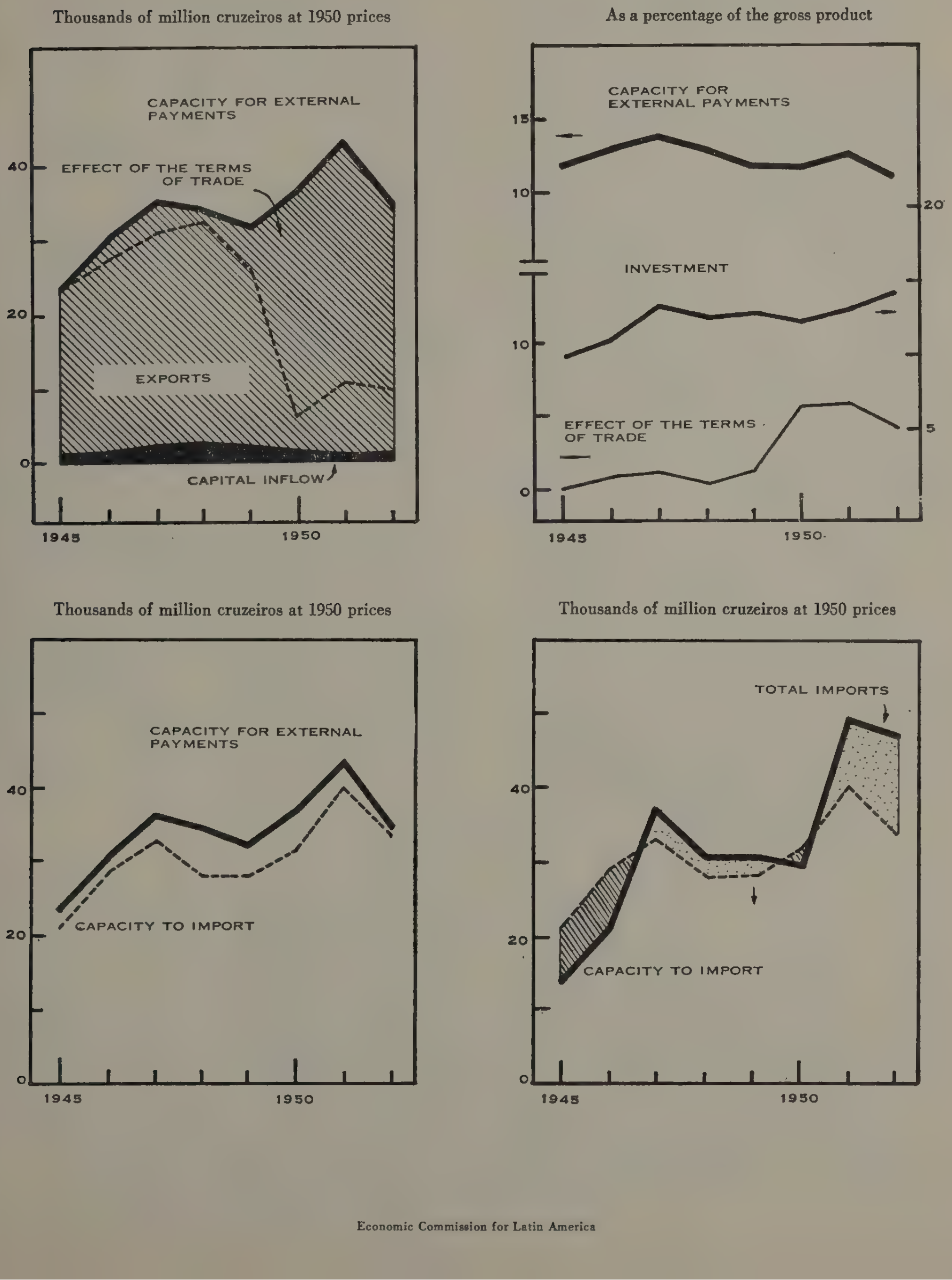
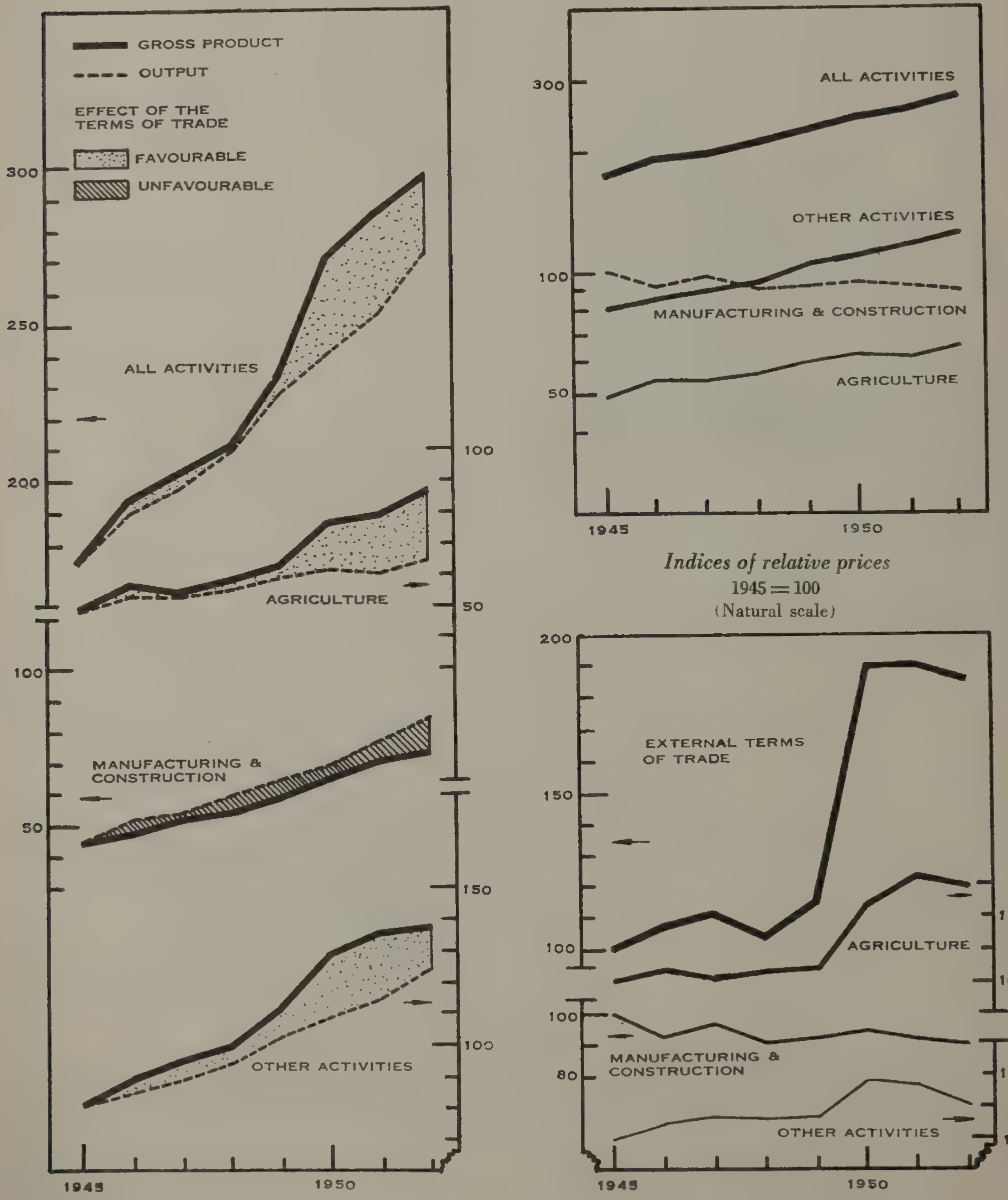


Plate 18

GROSS PRODUCT, OUTPUT AND INDICES OF THE TERMS OF TRADE, BY ACTIVITIES, IN BRAZIL, 1945-52



Gross product and output
Thousands of million cruzeiros at 1950 prices
(Natural scale)

Output
Thousands of million cruzeiros at 1950 prices
(Semi-logarithmic scale)

Indices of relative prices
1945 = 100
(Natural scale)

Table 40. The ratio of the capacity for external payments and investment to the gross product, in Brazil, 1945–52

Years	Capacity for external payments	Investment	Capacity for external payments	Investment
	(thousands of million cruzeiros at 1950 prices)		(as a percentage of the gross product)	
	(1)	(2)	(3)	(4)
1945.....	23.2	17.5	13.4	10.1
1946.....	30.4	24.0	15.7	12.4
1947.....	35.9	33.8	17.8	16.7
1948.....	34.3	31.6	16.2	14.9
1949.....	31.8	36.2	13.7	15.6
1950.....	36.6	40.4	13.5	14.9
1951.....	43.3	46.7	15.2	16.4
1952.....	34.8	54.5	11.7	18.3

Sources and methods

Col. (1): Table 39, col. (3).
Col. (2): Table 37, col. (3).
Col. (3): Col. (1) as a percentage of table 33, col. (2).
Col. (4): Col. (2) as a percentage of table 33, col. (2).

planted areas. Moreover, in 1952, cotton exports decreased simultaneously with a comparable trend for other products. Reliable sources ascribe at least a part of this contraction to the deterrent produced by an obvious external over-valuation of the cruzeiro, which the authorities are now attempting to correct.[4]

No reference has been made to the net inflow of foreign capital since it was of little importance throughout the period under review, as may be seen from the first chart of plate 17.

Turning now to the second chart on the same plate, fluctuations in the capacity for external payments may be studied in relation to those of investment, both of which are shown as percentages of the gross product. In 1952, however, the investment ratio remained much higher than that of the capacity for external payments, due to the special position of Brazil's external account during the past few years. As pointed out above, the use of monetary reserves and foreign credits provided Brazil with a substantial volume of imports of goods and services —which in fact exceeded exports—and thereby contributed to the maintenance of such a high rate of investment. In view of the temporary nature of these resources, one might well enquire whether Brazil can maintain a rate of investment equivalent to 20 per cent of its gross product. This would appear unlikely unless it is possible to improve the capacity for external payments, by increasing exports and stimulating the inflow of foreign capital, particularly since there are no current indications that the terms of trade are likely to undergo new improvements.

7. IMPORTS

Trends in the capacity to import have followed those in the capacity for external payments. Thus, no significant changes have taken place recently in the structure of Brazil's geographic balance of payments, as may be seen from the third chart of plate 17 (table 39).

By the use of such transient expedients as those described above, Brazil's imports exceeded the capacity to import. During the period 1945-52, this excess of imports over the capacity to import amounted to 16,200 million cruzeiros, or, in other words, 16.0 per cent of that capacity. During the Second World War and in the years 1945, 1946 and 1950, however, the level of imports remained below that of the capacity to import, with a consequent accumulation of monetary reserves.

It is now necessary to consider the ratio of imports to available goods and services, and their distribution between consumption and investment, by reference to plate 19 (table 41). According to the two upper charts, the persistent increase of the proportion of investment in available goods and services, at the expense of consumption, coincided with a rising trend in the coefficient of imports.

This might indicate that imports of capital goods required for the expansion of investments exercised a preponderant influence on the rising tendency of the coefficient of imports. However, that is not the case. A glance at the two remaining charts will confirm this assertion. In the third chart, it will be seen that imports of capital goods tended to decline in relation to total imports, with the exception of 1952, while the reverse occurred for other imported goods. This relative contraction in imports of capital goods, concurrent with an

Table 41. Composition of imports in Brazil, 1945–52

Years	Total imports (millions of cruzeiros at 1950 prices)	Consumer goods	Raw materials	Fuel	Capital goods	Consumer goods	Raw materials	Fuel	Capital goods
		(millions of cruzeiros at 1950 prices)				(as a percentage of the total)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1945..................	13,535	4,994	1,976	1,448	5,116	36.9	14.6	10.7	37.8
1946..................	21,210	6,193	2,927	2,588	9,502	29.2	13.8	12.2	44.8
1947..................	36,705	12,296	4,221	3,781	16,407	33.5	11.5	10.3	44.7
1948..................	30,444	10,625	3,775	3,927	12,117	34.9	12.4	12.9	39.8
1949..................	30,225	11,092	3,990	3,899	11,244	36.7	13.2	12.9	37.2
1950..................	29,700	10,484	4,069	4,010	11,137	35.3	13.7	13.5	37.5
1951..................	49,185	18,592	6,837	5,804	17,952	37.8	13.9	11.8	36.5
1952..................	47,229	15,019	4,770	6,423	21,017	31.8	10.1	13.6	44.5

Sources and methods

Col. (1): Table 35, col. (4).
Cols. (2), (3), (4) and (5): Col. (1) multiplied by cols. (6), (7), (8) and (9), respectively.
Cols. (6), (7), (8) and (9): Based on a tabulation of the quantum of imports in 1948 prices, made by the United Nations Economic Commission for Latin America.

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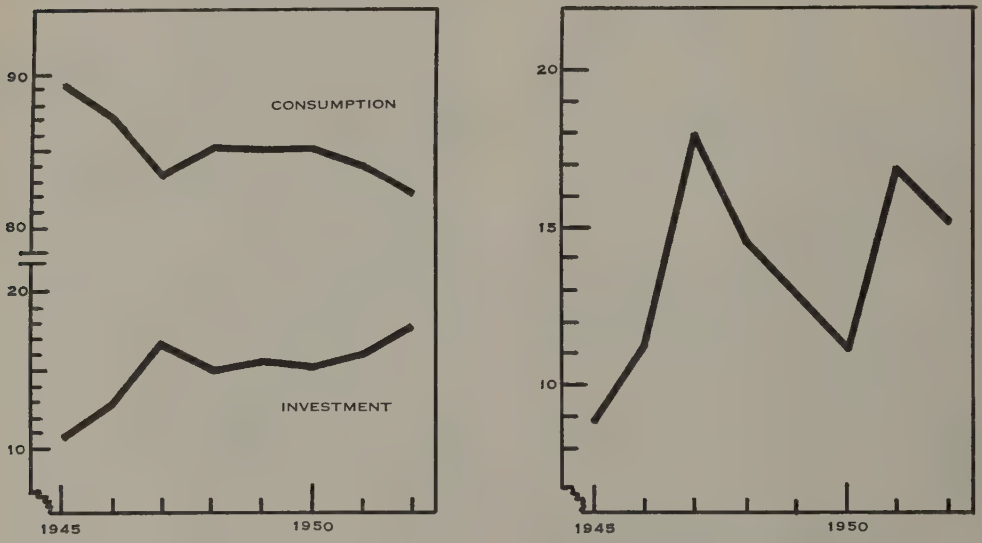
[4] In 1949-50, an attempt had already been made to correct this situation by authorizing combined or barter operations. Recently (February 1953) a free exchange market was established.

Plate 19

RELATIONSHIP BETWEEN AVAILABLE GOODS AND SERVICES, CONSUMPTION AND INVESTMENT, AND IMPORTS, IN BRAZIL, 1945-52

(Natural scale)


Consumption and investment as a percentage of available goods and services

Imports as a percentage of available goods and services

Ratio of imports of capital goods and other goods to total imports

Imports of capital goods and other goods as a percentage of investment and consumption respectively

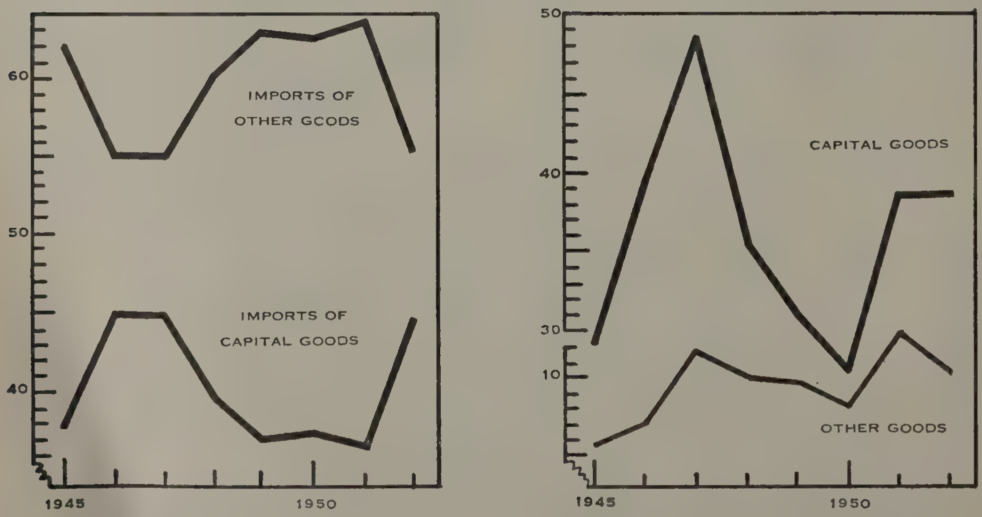


Table 42. Relative importance of imports with respect to investment, consumption and available goods and services, in Brazil, 1945–52

Years	*Ratio of capital goods to investment* (1)	*Consumer goods* (2)	*Raw materials* (3)	*Fuel* (4)	*Ratio of total imports to available goods and services* (5)
		(as a percentage of consumption)			
1945	29.1	3.1	1.4	1.0	8.8
1946	39.6	3.8	1.8	1.6	11.4
1947	48.5	7.2	2.4	2.2	17.9
1948	35.3	5.9	2.1	2.2	14.5
1949	30.9	5.6	2.0	2.0	12.9
1950	27.5	4.7	1.8	1.8	11.2
1951	38.4	7.6	2.8	2.4	16.8
1952	38.5	5.9	1.9	2.5	15.2

Sources and methods

Col. (1): Table 41, col. (5) as a percentage of table 37, col. (3).

Cols. (2), (3) and (4): Table 41, cols. (2), (3) and (4), respectively, as a percentage of table 34, col. (2).

Col. (5): Table 41, col. (1) as a percentage of table 39, col. (1).

increase in the ratio of investment to the gross product, emphasizes the growing importance of capital goods industries in Brazil. As may be seen from the fourth chart, this explains the declining trend of the rate of imports of capital goods as compared with investment as a whole. Conversely, the ratio of other imports to total consumption would appear to point upward. Among the principal factors contributing to this disparity between the rate of imports, are imports of fuels and certain essential raw materials, which Brazil is as yet unable to substitute and which have tended to increase more rapidly than total consumption; this also applies to imports of passenger motor vehicles.[5] This mainly explains the rising tendency observed in imports of other goods from the standpoint of their consumption in Brazil. It would therefore seem that in the case of capital goods industries, import substitution was more intense than in consumer goods industries. This is not unusual, since the phase of easy substitution has been left behind in the case of consumer goods industries, a rate of 10.3 per cent of imports having been recorded in 1952. In the case of investments, conversely, the rate was still relatively high, namely, 38.5 per cent.

8. THE GROSS PRODUCT, OUTPUT AND RELATIVE PRICES, BY ACTIVITIES

Elsewhere in this report, the expansion in Brazilian output between 1945 and 1952 was seen to have attained an annual rate of increase of 6.6 per cent, while that of the gross product was 8 per cent. The evolution of this process will now be studied in relation to the main activities, plate 18 having been prepared for this purpose (table 43).

Manufacturing developed at a fairly high annual rate, namely, 9.2 per cent. The characteristic process of attracting capital and labour to industry and to other urban activities has continued, though more intensively than before. This, however, has not prevented agriculture from expanding at an annual rate of 4.2 per cent between 1945 and 1952, representing a per capita growth of 1.8 per cent annually.

In the gross product figures, the difference between both activities is almost eliminated; in fact, between 1945 and 1952 the gross product in manufacturing rose 7.4 per cent annually, as compared with 8.5 per cent in agriculture.

This contrast stems from different trends in the relative prices. In manufacturing, as may be seen from plate 18, relative prices developed adversely throughout the entire period 1945-52.

In any event, the gross product transferred from the manufacturing sector to other spheres of economic activity continues to be appreciable in relation to its 1945 level. Manufacturing is thus transferring at least part of the benefits accruing from higher productivity.[6]

The reverse trend in agriculture is far more clearly defined. In this case, relative prices tended to improve after 1947. Statements appearing elsewhere in this report, relating to the same aspect of this subject, bear repetition. For instance, the data for the different activities are not perfect, so that the conclusions drawn here should be regarded as provisional until further research enables a more accurate appraisal. From 1949 onward, the improvement in the relative prices for agriculture undoubtedly originated in the high prices paid for coffee.

The improvement in the relative prices of agriculture can by no means be attributed to manufacturing. Moreover, during the period 1945-48, when manufacturing prices declined, agriculture obtained no corresponding advantage, as will readily be observed from plate 18. This indicates that the transfer of the gross product from manufacturing proved advantageous to other activities, including commerce, transport, constuction, government and personal services. These other activities accounted for 46.3 per cent of the gross product in 1952.

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[5] It should be underlined that the system of bilateral agreements for foreign trade hampers the total exclusion of certain imports of consumer goods. With a view to obtaining markets for a number of so-called "non-essential goods", Brazil is, in turn, obliged to accept other goods of the same type in exchange.

[6] Data obtained from the first measurement of labour productivity in manufacturing industries (see ECLA document E/CN.12/217/Add.2, submitted to the fourth session) showed an improvement of 31 per cent between 1945 and 1950.

Table 43. Gross product, output and relative prices, by activities, in Brazil, 1945–52

Years	*Gross product*	*Output*	*Indices of relative prices 1945=100*	*Gross product*	*Output*	*Indices of relative prices 1945=100*
	(thousands of million cruzeiros at 1950 prices)			*(thousands of million cruzeiros at 1950 prices)*		
	(1)	(2)	(3)	(4)	(5)	(6)
	A. All activities			*B. Agriculture*		
1945...	173.4	173.4	100.0	48.6	48.6	100.0
1946...	194.0	190.9	106.8	56.5	53.8	104.8
1947...	202.1	197.4	111.0	54.2	53.8	100.6
1948...	211.6	209.8	104.3	57.8	55.8	103.6
1949...	232.7	227.1	114.6	62.4	59.6	104.7
1950...	270.9	240.6	189.0	76.4	62.0	123.2
1951...	285.5	252.9	189.4	79.4	60.1	132.0
1952...	296.5	271.9	185.3	85.9	65.0	129.4
	C. Manufacturing			*D. Other activities*		
1945...	44.5	44.5	100.0	80.4	80.4	100.0
1946...	47.9	51.9	92.4	89.6	85.2	105.2
1947...	52.1	54.0	96.6	95.8	89.6	107.0
1948...	54.0	59.8	90.2	99.9	94.2	106.0
1949...	59.3	64.6	91.8	111.0	102.9	107.9
1950...	65.6	69.7	94.0	129.0	108.9	118.4
1951...	70.2	77.3	90.8	135.9	115.5	117.7
1952...	73.3	82.4	89.0	137.3	124.5	110.3

Sources and methods

For a general discussion of concepts and methods, see the general note at the end of chapter I and the notes to table 12.

Cols. (1) and (4): See note to table 33, col. (2).
Cols. (2) and (5): See note to table 33, col. (5).
Cols. (3) and (6): See note to table 12, col. (3).

C. Chile[7]

1. The relatively slow growth of Chile

Chile's growth has been relatively slow. According to estimates based upon data of the Corporación de Fomento de la Producción (Production Development Corporation), the gross product increased by only 2.8 per cent annually between 1945 and 1952. This is one of the lowest growth rates in Latin America which, as already stated, experienced an annual rate of increase of 5.6 per cent between these years. Since Chile's demographic growth has also been moderate, namely, 1.7 per cent annually, there was a resulting improvement in the per capita gross product of 1.2 per cent annually. This is less than half the rate of per capita growth for the gross product calculated for Latin America as a whole.

The facts and figures which explain this situation will be analysed in detail. What must be emphasized at this stage is the low rate of investment during the past twenty years. The basic point is that Chile, unlike most of the Latin-American countries, has not been able to regain the advantageous levels for the terms of trade which existed in 1925-29. This has acted as a depressive influence on investment, which tends to follow changes in the terms of trade. Even in the more recent years 1950-52, when the terms of trade experienced a decided improvement, this favourable development was not used to increase investment, as was the case in many other countries. It would seem, therefore, that all benefits from the more favourable terms of trade were devoted to consumption. It is also true that Chilean consumption fluctuates within very narrow limits and, therefore, any lessening in external pressures tends to be used for an immediate improvement in the standard of living. Herein lies one of the fundamental causes for Chile's relatively slow development, a phenomenon that will be analysed later in its different aspects.

2. Output, the gross product and the terms of trade

Agricultural, manufacturing and mining output (activities which together represented 45 per cent of the gross product in 1952) expanded at an annual rate of 3.2 per cent between 1945 and 1952, whereas estimates of the gross product, for the economy as a whole, indicated an annual rate of only 2.8 per cent. The difference becomes somewhat greater when it is realized that these gross product figures reflect a very substantial improvement in the terms of trade. In the absence of such improvement, the gross product would have expanded at the rate of 1.4 per cent annually.

The effect of the terms of trade improvement on the gross product in Chile is shown in the first chart of plate 20 (table 44). This chart gives some indication of the extent of a phenomenon which, throughout the period 1945-52, enabled Chile to obtain an additional product of 43,700 million pesos at 1950 prices. This implies an

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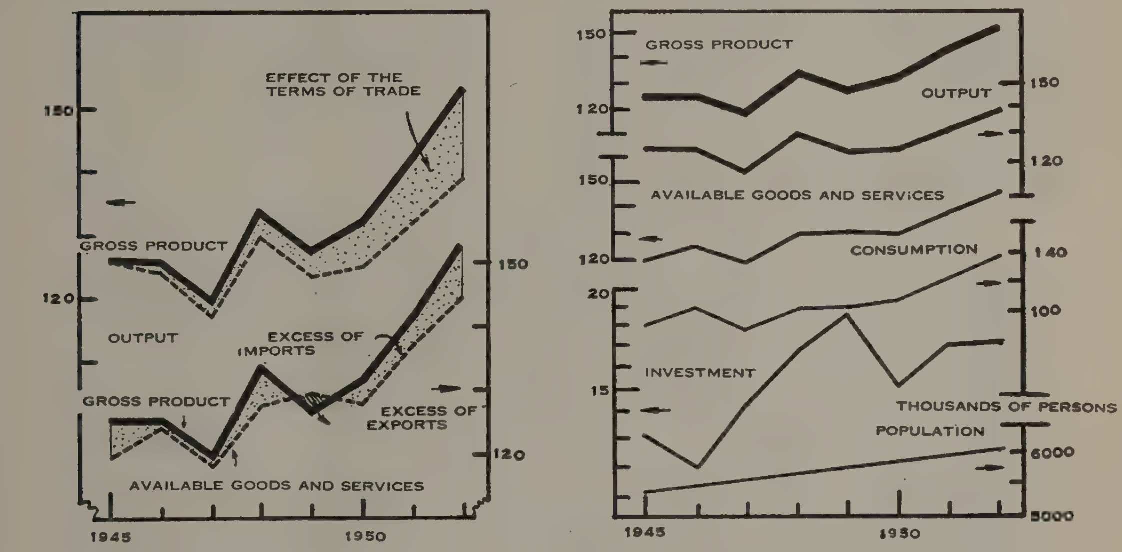
[7] The calculations made in this analysis are based on gross product data expressed in 1950 prices, that is, all the statistical series are expressed in constant values. For this, and other aspects, see general note at end of chapter I. Estimates for 1952 are preliminary.

Plate 20

RECENT ECONOMIC DEVELOPMENT OF CHILE, 1945-52

Thousands of million pesos at 1950 prices



Gross product, output and available goods and services
(Natural scale)

Rate of growth of the gross product, output and available goods and services
(Semi-logarithmic scale)

Output, capital stock and productivity in all activities
(Semi-logarithmic scale)

Output, capital stock and productivity in agriculture, manufacturing and mining
(Semi-logarithmic scale)

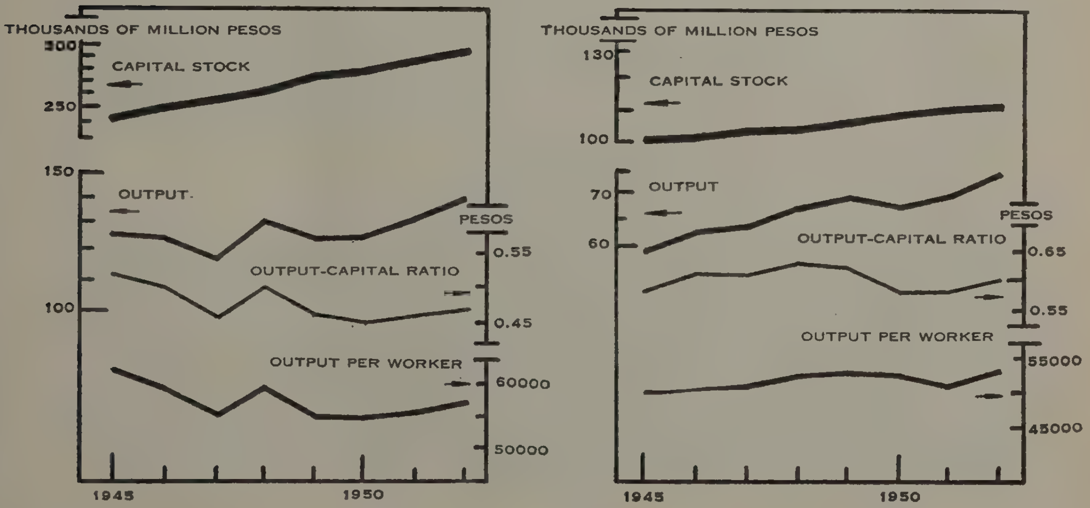


Table 44. Population, the gross product, output, capital and productivity in Chile, 1945–52

(Pesos at 1950 prices)

Years	Population (thousands) (1)	Gross product (thousands of million pesos) (2)	Index of terms of trade 1945 = 100 (3)	Effect of the terms of trade since 1945		Output	Capital	Output	
				Absolute figures (thousands of million pesos) (4)	As a percentage of the gross product (5)	(thousands of million pesos) (6)	(7)	Output-capital ratio (8)	Output per worker (thousands of pesos) (9)
1945	5,352	125.6	100.0	–	–	125.6	241.2	0.52	62.6
1946	5,433	125.4	105.0	1.5	1.2	123.9	247.8	0.50	59.2
1947	5,527	119.5	107.8	2.3	1.9	117.2	253.9	0.46	54.9
1948	5,623	133.5	112.7	3.9	2.9	129.6	260.9	0.50	59.4
1949	5,715	127.0	113.0	3.6	2.8	123.4	270.7	0.46	55.0
1950	5,814	131.9	127.6	7.2	5.5	124.7	277.3	0,45	54.3
1951	5,915	142.0	139.5	10.7	7.9	131.3	284.7	0.46	55.7
1952	6,015	152.7	149.7	14.5	9.8	138.2	292.0	0.47	57.1

Sources and methods

Cols. (1), (2), (3), (5) and (6): See general note at the end of chapter I on sources, methods and concepts.

Col. (2): The estimates of the gross product of Chile here presented are based on a preliminary and unpublished study of "The Gross Product of Chile, 1940–1952", by the Corporación de Fomento de la Producción. For earlier works, by this organization, in the field of gross product estimation, and a discussion of sources, methods and concepts, see *Renta Nacional, 1940–1945*, volumes 1 and 2, Corporación de Fomento de la Producción, Santiago, Chile, 1946; and *Geografía Económica de Chile*, volume II, Corporación de Fomento de la Producción, Santiago, Chile, 1950. The preliminary, unpublished study here used is based on an extensive revision and amplification of these earlier works. The broadened scope of the new work of the Corporación de Fomento de la Producción may be briefly described, as follows: In the earlier works, referred to above, this organization had made direct and independent estimates of (1) the gross product, by type of final expenditure; (2) the net product at factor cost, by activity, and (3) the net product at factor cost, by type of compensation. The new preliminary and unpublished study presents consolidated income and expenditures, by type of compensation and final expenditure, respectively, for (*a*) enterprises; (*b*) persons and non-profit institutions; (*c*) the central government, and (*d*) the external trade sector. This made possible the presentation of a consolidated gross saving and investment account.

Because of the more comprehensive scope of the gross product data for Chile, compared with other countries in Latin America, the gross product is estimated as the sum of final demand expenditure at market prices—that is, consumption expenditures, plus investment expenditures, plus exports, and less imports, each of which is estimated directly and independently. It should, therefore, be noted that the estimate of consumption included for Chile is a direct and independent estimate, in contrast to the treatment here used in the analyses for Argentina, Brazil, Mexico and Latin America as a whole. For the four latter groups, consumption is estimated as a residual function of the gross product, less gross investment, less exports, plus imports.

The gross product of Chile has been deflated through the use of a gross product deflator index calculated by the Corporación de Fomento de la Producción as a weighted composite of the cost-of-living index and other price indexes. Because of deficiencies in price indexes, discussed in the general note at the end of chapter I, the method of deflating. the gross product, here used, is considered to be less satisfactory than the method used in the case of Argentina, Brazil, and Mexico (see the general note at the end of chapter I, and the notes to tables 20, 33 and 55). It is believed that the gross product deflation method for Chile probably has the effect of understating the growth in the gross product and distorting year-to-year movements.

To maintain consistency of treatment of the balance of payments data in this study, the balance of payments data for Chile, which are originally reported in dollars, were converted to Chilean pesos of 1950 on the basis of purchasing-power parity rates of exchange. Thus, the balance of payments data here used differ slightly in level from those used in the study of the Corporación de Fomento de la Producción. The over-all structure of the balance of payments, however, is not affected, and the resulting difference in level is small. In the price-base year, 1950, for example, the resulting difference amounts to less than one per cent of the gross product.

Col. (3): Calculated by the United Nations Economic Commission for Latin America.

Col. (4): Based on col. (3); see general note at the end of chapter I.

Col. (5): Col. (4) as a percentage of col. (2).

Col. (6): Col. (2) less col. (4); see general note at the end of chapter I.

Col. (7): The estimate of the stock of capital here used is based principally on the unpublished study, "El proceso de capitalización en Chile, 1938–1950", by Ewald Hasche S., University of Chile, Institute of Economics, 1951. This study presents the depreciated replacement value of fixed capital, by activities, for the period 1938–1949. It is based on the 1938 Census of Industry, and on corporation balance sheets for that year. The benchmark estimate of the value of the stock of capital in 1938, takes into account detailed information on the age composition of the stock of capital in 1938, by type of capital good. The estimate was extended year by year, by depreciating existing capital and adding new investment. The estimate of the stock of capital excludes inventories, except for cattle.

The following main adjustments have been applied to the estimates by Hasche. A more up-to-date and more adequate estimate of the value of the stock of capital in the agricultural sector, by the Corporación de Fomento de la Producción, has been used in place of Hasche's estimate for this sector. Hasche's estimates have been reworked to introduce different assumptions on the average length of life of the stock of capital; see the general note at the end of chapter I. Hasche's estimates have been extended for the years 1950, 1951 and 1952, and have been adjusted for revisions in the gross investment estimates since the time of the completion date of his study. See note to col. (2) of this table.

Col. (8): Col. (6) divided by col. (7).

Col. (9): Col. (6) divided by estimates of the active population. The latter are from the Corporación de Fomento de la Producción sources cited in the note to col. (2) of this table.

average of 4.7 per cent of the gross product during this period, according to the above-mentioned estimates.

This improvement in the terms of trade, while being important in Chile, did not have the same implications as in other countries. Indeed, the Chilean terms of trade deteriorated sharply after the world economic crisis of 1929, and have never recovered their former level. The terms of trade for 1951 and 1952 were the highest since the contraction, although they were still 42 per cent below the level of 1925-29. This has been one of the most important factors influencing new capital investments, which also failed to recover the level attained in the years of prosperity, both in absolute terms and in relation to the gross product. Here is one of the main causes for the relatively slow development of Chile.

3. AVAILABLE GOODS AND SERVICES, CONSUMPTION AND INVESTMENT

While the improvement in the terms of trade contributed to increasing the Chilean gross product, other elements have had the reverse effect by reducing, although to a lesser degree, the volume of available goods and services for consumption and investment. Available goods and services were lower than the gross product for the period 1945-52, with the exception of a single year, as may be seen from the first chart on plate 20. Chile has had to export more goods and services than are imported, as shown in table 44, thus reducing the volume of available goods and services. In tables 45 and 46, trends in the geographic balance of payments, explaining this chronic excess of exports, may be studied. Furthermore, the inflow of new capital into Chile was lower than income remitted abroad on foreign investments. The difference had to be covered by exports, to the extent that it could not be offset by monetary reserves and compensatory external short-term credits. In 1945-52, the volume of remittances was equivalent to 38,600 millions, whereas the inflow of capital was 18,800 millions. Since a total 14,000 millions of foreign-owned capital was simultaneously repurchased, however, the net capital inflow

Table 45. Exports and imports of goods and services in Chile, 1945–52
(Thousands of million pesos at 1950 prices)

Years	*Imports*				*Exports*				*Excess of imports or exports (−)*
	Goods (1)	*Freight and insurance* (2)	*Other services* (3)	*Total* (4)	*Goods* (4)	*Freight and insurance* (6)	*Other services* (7)	*Total* (8)	(9)
1945	16.0	4.3	1.0	21.3	24.7	1.9	1.0	27.6	−6.3
1946	19.2	4.7	1.4	25.3	23.3	1.4	1.4	26.1	−0.8
1947	21.7	5.4	1.4	28.5	26.8	1.2	1.4	29.4	−0.9
1948	19.8	5.3	1.4	26.5	29.4	1.4	1.3	32.1	−5.6
1949	22.0	5.6	1.4	29.0	23.6	1.4	1.3	26.3	2.7
1950	18.0	4.7	1.5	24.2	26.0	1.1	1.0	28.1	−3.9
1951	21.7	5.4	1.5	28.6	30.9	1.2	1.1	33.2	−4.6
1952	24.1	5.4	1.3	30.8	36.7	0.7	1.0	38.4	−7.6

Sources and methods

See general note at the end of chapter I on the balance of payments.

1945: *Balance de pagos de Chile, 1945*, Banco Central de Chile.

1946–50: *Balance of Payments Yearbook*, International Monetary Fund.

1951–52: Banco Central de Chile.

For definitions and coverage of the column headings, see *Balance of Payments Yearbook*, International Monetary Fund, vols. 3 and 4.

Col. (1): Import data was converted from a c.i.f. to an f.o.b. basis by assuming a uniform deduction of 17 percent.

Col. (2): The 17 per cent deduction from c.i.f. imports was added to the gross debits reported for Chilean transport and insurance accounts.

Cols. (3) and (7): Primarily foreign travel and government.

Col. (5): Includes non-monetary gold.

Col. (6): Gross credits reported for Chilean transport and insurance accounts.

Table 46. Movements of external payments which tend to increase or decrease available goods and services in Chile, 1945–52
(Thousands of million pesos at 1950 prices)

A. Factors which tend to increase available goods and services

Years	*Inflow of foreign capital*				*Decrease in official monetary reserves* (5)	*Official short-term credit* (6)	*Total* (7)
	Direct, long-term (1)	*Short-term* (2)	*Special official financing* (3)	*Total* (4)			
1945	..	..	0.7	0.7	–	0.8	1.5
1946	–	–	0.6	0.6	4.6	–	5.2
1947	0.2	–	0.3	0.5	3.1	2.0	5.6
1948	0.4	0.3	1.4	2.1	–	0.3	2.4
1949	4.4	–	3.4	7.8	0.1	–	7.9
1950	–	–	1.4	1.4	–	1.1	2.5
1951	1.0	–	0.8	1.8	–	0.9	2.7
1952	2.4	–	1.5	3.9	–	–	3.9

B. Factors which tend to decrease available goods and services

Years	Outflow of foreign capital				Remittance of profits and interest (13)	Increase in official monetary reserves (14)	Decrease in official short-term credit (15)	Total (16)
	Amortization (9)	Direct (10)	Short-term capital (11)	Total (12)				
1945.........	1.2	...	...	1.2	4.1	0.7	0.6	6.6
1946.........	1.6	1.2	–	2.8	3.9	–	–	6.7
1947.........	0.9	–	0.1	1.0	5.4	–	–	6.4
1948.........	1.1	–	–	1.1	6.3	0.8	–	8.2
1949.........	1.6	–	0.1	1.7	4.5	–	0.1	6.3
1950.........	1.3	0.4	–	1.7	4.9	0.4	–	7.0
1951.........	2.0	–	–	2.0	4.8	0.3	–	7.1
1952.........	1.8	–	0.7	2.5	4.7	1.7	1.0	9.9

C. Net result

Years	Factors of increase (17)	Factors of decrease (18)	Errors and omissions (19)	Excess of imports or exports (–) (20)
1945.................	1.5	6.6	–1.2	–6.3
1946.................	5.2	6.7	0.7	–0.8
1947.................	5.6	6.4	–0.1	–0.9
1948.................	2.4	8.2	0.2	–5.6
1949.................	7.9	6.3	1.1	2.7
1950.................	2.5	7.0	0.6	–3.9
1951.................	2.7	7.1	–0.2	–4.6
1952.................	3.9	9.9	–1.6	–7.6

Sources and methods

See general note at the end of chapter I on the balance of payments.

For general sources, see notes to table 45.

Col. (9): Primarily repayment of United States Export-Import Bank loans and credits, and amortization of the public debt.

Col. (10): Direct investment outflows in 1946 and 1950 were primarily due to net reduction in foreign mining investment in Chile. See *Balance of Payments Yearbook*, International Monetary Fund, vol. 2, pp. 108–109; vol. 4, p. 73.

amounted to a total of only 4,800 millions. Hence, profit remittances exceeded net capital inflow by 33,800 millions, equivalent to 3.2 per cent of the gross product, during this period.

By deducting the excess of exports from the gross product (tables 47 and 48) the figures for available goods and services are obtained. The latter will now be analysed as to their distribution between consumption and investment. In the first place, the annual growth of consumption was moderate between 1945 and 1952: 2.7 per cent in total, and one per cent per capita. However, the information in the charts of plate 22 indicates that this growth rate was not consistent throughout the entire period. Between 1945 and 1949, for example, the proportion of goods and services for consumption fell noticeably, from 88.9 to 85.7 per cent, thereby favouring investment. Between 1949 and 1952, however, the relative importance of consumption rose, at the expense of investment and of even greater significance is the fact that this occurred when the terms of trade were more favourable for Chile and when greater incentives for capital formation existed (see plate 21). This suggests that the entire benefit accruing from the improvement in the terms of trade has been applied to consumption.

Table 47. The gross product and available goods and services for consumption and investment, in Chile, 1945–52

(Thousands of million pesos at 1950 prices)

Years	Gross product (1)	Excess of imports or exports (–) (2)	Available goods and services (3)
1945.......	125.6	–6.3	119.3
1946.......	125.4	–0.8	124.6
1947.......	119.5	–0.9	118.6
1948.......	133.5	–5.6	127.9
1949.......	127.0	2.7	129.7
1950.......	131.9	–3.9	128.0
1951.......	142.0	–4.6	137.4
1952.......	152.7	–7.6	145.1

Sources and methods

Col. (1): Table 44, col. (2).
Col. (2): Table 45, col. (9).
Col. (3): Col. (1) plus col. (2).

The rate of investment is relatively low in Chile. This serves to explain why manufacturing, agricultural and mining output rose at a rate of only 3.2 per cent, whereas the other countries of Latin America, excluding Argentina for special reasons, recorded an annual growth rate for aggregate output of 4.8 per cent between 1945 and 1952.

4. Capital accumulation and productivity

For the above reasons, the rate of capital accumulation was less than 3 per cent per year between 1945 and 1952. By relating this rate to that of total output, a decline in both the output-capital ratio, and in output per worker will be noted (see the third chart of plate 20).

For agriculture, manufacturing, construction and mining, the accumulation of capital was almost similar to

Plate 21

CAPACITY FOR EXTERNAL PAYMENTS AND CAPACITY TO IMPORT, AND THEIR INFLUENCE ON INVESTMENT AND IMPORTS, IN CHILE, 1945-52

(Natural scale)

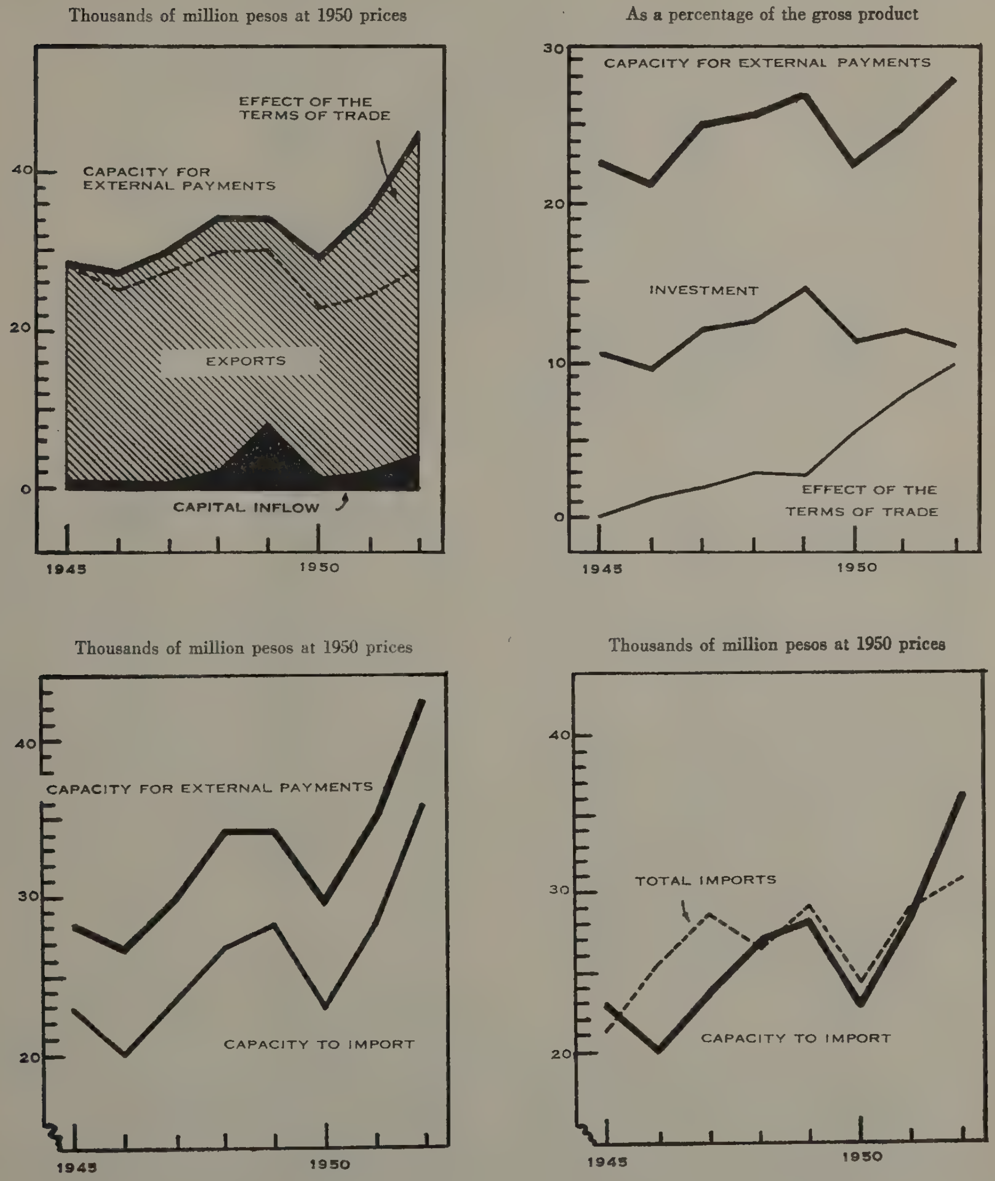


Table 48. Available goods and services, consumption and investment in Chile, 1945–52

(Pesos at 1950 prices)

Years				*Ratio to the total*		*Per capita*		
	Total	*Consumption*	*Investment*	*Consumption*	*Investment*	*Total available goods and services*	*Consumption*	*Investment*
	(thousands of million pesos)			*(percentages)*		*(thousands of pesos)*		
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*
1945	119.3	106.1	13.2	88.9	11.1	22.3	19.8	2.5
1946	124.6	112.7	11.9	90.4	9.6	22.9	20.7	2.2
1947	118.6	104.3	14.3	87.9	12.1	21.5	18.9	2.6
1948	127.9	111.2	16.7	86.9	13.1	22.8	19.8	3.0
1949	129.7	111.2	18.5	85.7	14.3	22.7	19.5	3.2
1950	128.0	112.9	15.1	88.2	11.8	22.0	19.4	2.6
1951	137.4	120.5	16.9	87.7	12.3	23.2	20.4	2.9
1952	145.1	128.1	17.0	88.3	11.7	24.1	21.3	2.8

Sources and methods

Col. (1): Table 47, col. (3).
Col. (2): See note to table 44, col. (2).
Col. (3): See note to table 44, col. (2).
Col. (4): Col. (2) as a percentage of col. (1).
Col. (5): Col. (3) as a percentage of col. (1).
Col. (6): Col. (1) divided by table 44, col. (1).
Col. (7): Col. (2) divided by table 44, col. (1).
Col. (8): Col. (3) divided by table 44, col. (1).

that for the economy as a whole, or, a rate of 2.7 per cent annually, while output increased 3.2 per cent. The greater increment to output partially reflects an improvement in the output-capital ratio, which rose slightly until 1948 and then declined, although it did not lose all the ground gained earlier. In contrast, product per worker tended to rise persistently, as a consequence of an increase in the stock of capital per worker. The latter was seen to grow at the rate of 3.3 per cent during the period 1945-52, while the product per worker rose 6.6 per cent.

Different tendencies produced these phenomena and are analysed in plate 23, where the first three charts show the respective curves for agriculture, manufacturing and mining. In the case of agriculture, attention should be directed to the decrease of capital stock, which declined at an annual rate of 1.2 per cent. It would appear that new investments were inadequate to compensate for the depreciation of invested capital. This leads to the conclusion that capital has been used relatively more intensively. Although by this means, deferred demand for capital also accumulated—which cannot be postponed for too long a period—some improvement has nevertheless been effected in the output-capital ratio.

On the other hand, the stock of capital in manufacturing increased 6.1 per cent, and output 4.9 per cent annually. It would therefore appear that the output-capital ratio declined somewhat, although in fact it was relatively high in Chile at the beginning of the period 1945-52, for the same reason as in other countries, namely, the intensive employment of existing capacity during the war. Investments made since then have allowed for a wider margin of idle capacity, with a consequent decrease in the output-capital ratio. It is quite possible that other factors were also present, but available data are inadequate to determine their influence.

Full capacity is clearly not being utilized in the case of mining, and the output-capital ratio has also declined.

The gross product per worker has developed in a distinct form for each type of activity. In mining, the labour force increased slowly while output declined and, as a consequence, output per worker decreased. In manufacturing, output per worker has increased at an annual rate of 2.1 per cent. Agriculture has remained stationary, output per worker diminishing by 0.2 per cent annually.

The rate of growth of output must now be compared in these three activities which, together, expanded at an annual rate of 3.2 per cent. The highest rate of growth took place in manufacturing output, namely, 4.9 per cent annually. This was slightly lower than official statistics indicate, owing to adjustment of the data for the past three years.[8] In agriculture, the rate of output growth was 1.9 per cent annually, whereas in mining it dropped to 0.7 per cent after sharp fluctuations.

5. THE CAPACITY FOR EXTERNAL PAYMENTS, THE CAPACITY TO IMPORT AND IMPORTS

Despite a contraction in exports, Chile's capacity for external payments rose from 28,300 million pesos in 1945 to 42,400 million pesos in 1952. This was largely due to the favourable trend in the terms of trade and, to a lesser extent, to the inflow of foreign capital. This may be seen in the first chart of plate 21 (tables 50 and 51).

The capacity for external payments exercised a marked influence upon investments. This is evident from the coefficients of both in relation to the gross product, as shown in the second chart. The investment coefficient follows the trend of the coefficent of capacity for external payment. The intensified repercussions of the terms of trade did not affect the coefficient of capacity for external payment to the same extent, owing to the aforementioned decline of exports.

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[8] The official estimates of industrial output were recalculated for the years 1950, 1951 and 1952 to give the expansion of iron and steel production its appropriate importance in terms of value added.

The capacity to import fluctuated in a similar manner to that of the capacity for external payments, varying between a maximum of 84.7 per cent in 1952 to a minimum of 77.7 per cent in 1950; the average has remained about 80 per cent of the total capacity. The difference can be explained principally by remittances of profits and interest and by the repurchase of foreign-owned capital, which in some years reached a substantial sum.

With the exception of 1945, 1948 and 1952, imports of goods and services exceeded the capacity to import, while there was a corresponding movement in monetary reserves and compensatory external short-term credits.

Table 49. Recent economic development of agriculture, manufacturing and mining in Chile, 1945–52

Years	*Output*	*Capital stock*	*Labour force (thousands)*	*Output-capital ratio*	*Output per worker (thousands of pesos at 1950 prices)*
	(thousands of million pesos at 1950 prices)				
	(1)	(2)	(3)	(4)	(5)
		A. Agriculture, manufacturing and construction, and mining			
1945	59.1	101.0	1,192	0.58	49.6
1946	62.7	102.1	1,250	0.61	50.2
1947	63.5	104.8	1,258	0.61	50.5
1948	66.8	106.7	1,277	0.63	52.3
1949	68.9	111.5	1,308	0.62	52.7
1950	66.9	115.1	1,332	0.58	50.2
1951	69.0	118.7	1,359	0.58	50.8
1952	73.5	121.5	1,389	0.60	52.9
		B. Agriculture			
1945	21.7	45.3	692	0.48	31.4
1946	22.3	44.1	707	0.51	31.5
1947	21.7	43.4	722	0.50	30.1
1948	23.5	43.0	737	0.55	31.9
1949	25.4	43.0	753	0.59	33.7
1950	23.5	41.9	769	0.56	30.6
1951	23.9	41.8	785	0.57	30.4
1952	24.8	41.5	802	0.60	30.9
		C. Manufacturing and construction			
1945	29.4	44.9	410	0.66	71.7
1946	33.3	47.3	454	0.70	73.4
1947	33.8	50.5	448	0.67	75.4
1948	34.8	52.7	450	0.66	77.3
1949	36.1	57.1	467	0.63	77.3
1950	36.1	61.6	474	0.59	76.2
1951	37.4	64.9	484	0.58	77.3
1952	41.1	68.0	496	0.60	82.9
		D. Mining			
1945	8.0	10.8	90	0.74	88.9
1946	7.1	10.7	89	0.66	79.8
1947	8.0	10.9	88	0.73	90.9
1948	8.5	11.0	90	0.77	94.4
1949	7.4	11.4	89	0.65	83.2
1950	7.3	11.6	89	0.63	82.0
1951	7.7	12.0	90	0.64	85.6
1952	7.6	12.0	92	0.63	82.6

Sources and methods

Col. (1): See general note at the end of chapter I and the note to table 12, col. (2).

A. Total: See note to table 44, col. (6).

B. Agriculture: Index of the quantum of agricultural output multiplied by the gross product originating in the agriculture sector in 1945, expressed in 1950 prices; based on official statistics.

C. Manufacturing and construction: Index of the quantum of manufacturing and construction output multiplied by the gross product originating in the manufacturing and construction sectors in 1945, expressed in 1950 prices. The official statistics on manufacturing and construction output were recalculated for the years 1950, 1951 and 1952, with a view to giving the expansion of iron and steel output, in this period, its relative importance in terms of value added.

D. Mining: Index of the quantum of mining output multiplied by the gross product originating in the mining sector in 1945, expressed in 1950 prices; based on official statistics.

Col. (2): See note to table 44, col. (7).

Col. (3): See note to table 44, col. (9).

Col. (4): Col. (1) divided by col. (2).

Col. (5): Col. (1) divided by col. (3).

Table 50. Capacity for external payments and the capacity to import in Chile, 1945–52

(Thousands of million pesos at 1950 prices)

A. Total capacity for external payments

Years	*Exports* (*1*)	*Inflow of foreign capital* (2)	*Total capacity for external payments* (3)	*Effect of the terms of trade since 1945*	
				Absolute figures (4)	*As a percentage of the total capacity* (5)
1945…………	27.6	0.7	28.3	–	–
1946…………	26.1	0.6	26.7	1.5	5.6
1947…………	29.4	0.4	29.8	2.3	7.7
1948…………	32.0	2.1	34.1	3.9	11.4
1949…………	26.4	7.8	34.2	3.6	10.5
1950…………	28.2	1.4	29.6	7.2	24.3
1951…………	33.2	1.8	35.0	10.7	30.6
1952…………	38.4	4.0	42.4	14.5	34.2

B. Capacity to import

Years	*Total capacity for external payments* (6)	*Remittance of profits and interest* (7)	*Repurchase of foreign-owned capital in Chile* (8)	*Capacity to import*		*Imports of goods and services* (*11*)
				Absolute figures (9)	*Percentage of total capacity* (10)	
1945…………	28.3	4.1	1.2	23.0	81.3	21.3
1946…………	26.7	3.9	2.8	20.0	75.0	25.3
1947…………	29.8	5.4	0.9	23.5	78.9	28.5
1948…………	34.1	6.3	1.1	26.7	78.3	26.4
1949…………	34.2	4.5	1.6	28.1	82.2	29.0
1950…………	29.6	4.9	1.7	23.0	77.7	24.2
1951…………	35.0	4.8	2.0	28.2	80.6	28.6
1952…………	42.4	4.7	1.8	35.9	84.7	30.9

Sources and methods

Col. (1): Table 45, col. (8).
Col. (2): Table 46, col. (4).
Col. (3): Col. (1) plus col. (2).
Col. (4): Table 44, col. (4).
Col. (5): Col. (4) as a percentage of col. (3).
Col. (6): Col. (3).
Col. (7): Table 46, col. (13).
Col. (8): Table 46, cols. (9) plus (10).
Col. (9): Col. (6) less cols. (7 + 8).
Col. (10): Col. (9) as a percentage of col. (6).

6. IMPORTS OF CAPITAL AND OTHER GOODS AND THEIR PROPORTION TO THE GROSS PRODUCT

The relatively slow development of the gross product makes the coefficient of imports, in relation to the gross product, higher than in other countries. The coefficient of capital goods imports to investment increased substantially throughout the period and, although it has lost some of its impetus in recent years, it still amounted to 59.4 per cent in 1952, as compared with 38.6 per cent in 1945. This corresponds to the growing proportion of imported capital goods to total imports, which increased from 23.7 per cent in 1945 to 32.8 per cent in 1952. There has been a certain downward tendency in the ratio of imports to consumption.

These facts appear to indicate that there is still a fairly wide margin in the field of investment for the substitution of imported goods, and that this margin is being used for developing the output of capital goods. This would account for the recent decline in the coefficient of imports of such goods, which was also affected by growing production at the new iron and steel plant. The decline

Table 51. Ratio of the capacity for external payments and investments to the gross product in Chile, 1945–52

Years	*Capacity for external payment*	*Investment*	*Capacity for external payment*	*Investment*
	Absolute figures (thousands of million pesos at 1950 prices)		*(percentage of the gross product)*	
	(1)	(2)	(3)	(4)
1945…..	28.3	13.2	22.5	10.5
1946…..	26.7	11.9	21.3	9.5
1947…..	29.8	14.3	24.9	12.0
1948…..	34.1	16.7	25.5	12.5
1949…..	34.2	18.5	26.9	14.6
1950…..	29.6	15.1	22.4	11.4
1951…..	35.0	16.9	24.6	11.9
1952…..	42.4	17.0	27.8	11.1

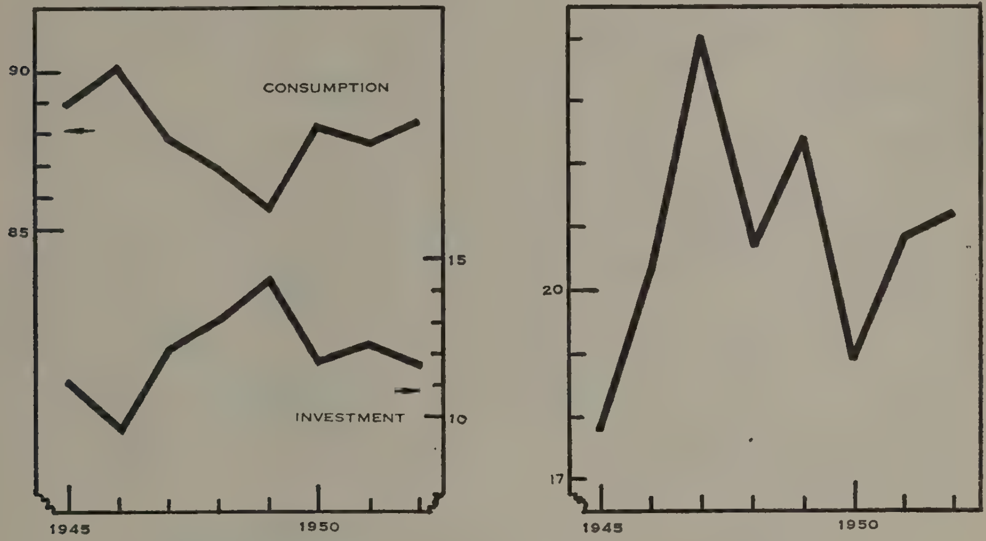
Sources and methods

Col. (1): Table 50, col. (3).
Col. (2): Table 48, col. (3).
Col. (3): Col. (1) as a percentage of table 44, col. (2).
Col. (4): Col. (2) as a percentage of table 44, col. (2).

Plate 22

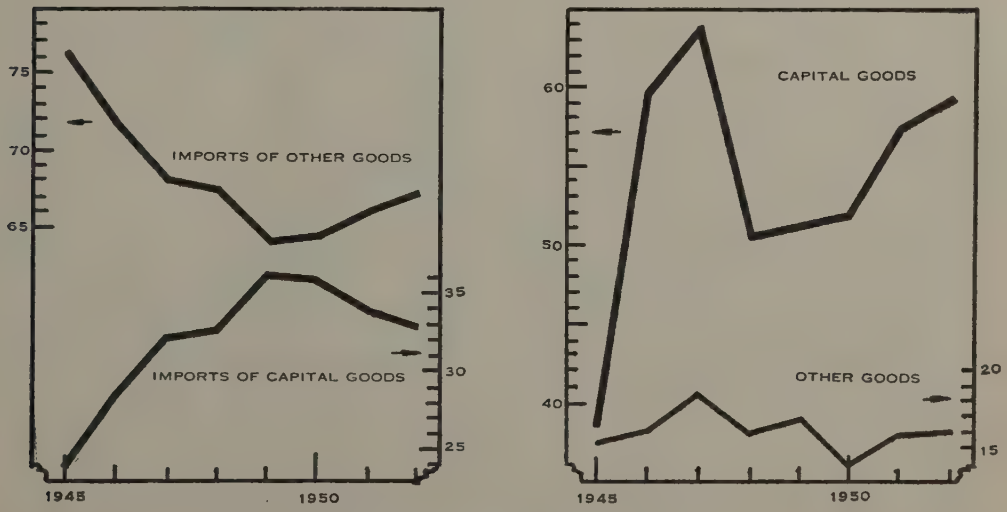
RELATIONSHIP BETWEEN AVAILABLE GOODS AND SERVICES, CONSUMPTION AND INVESTMENT, AND IMPORTS IN CHILE, 1945-52

(Natural scale)



Consumption and investment as a percentage of available goods and services

Imports as a percentage of available goods and services



Ratio of imports of capital goods and other goods to total imports

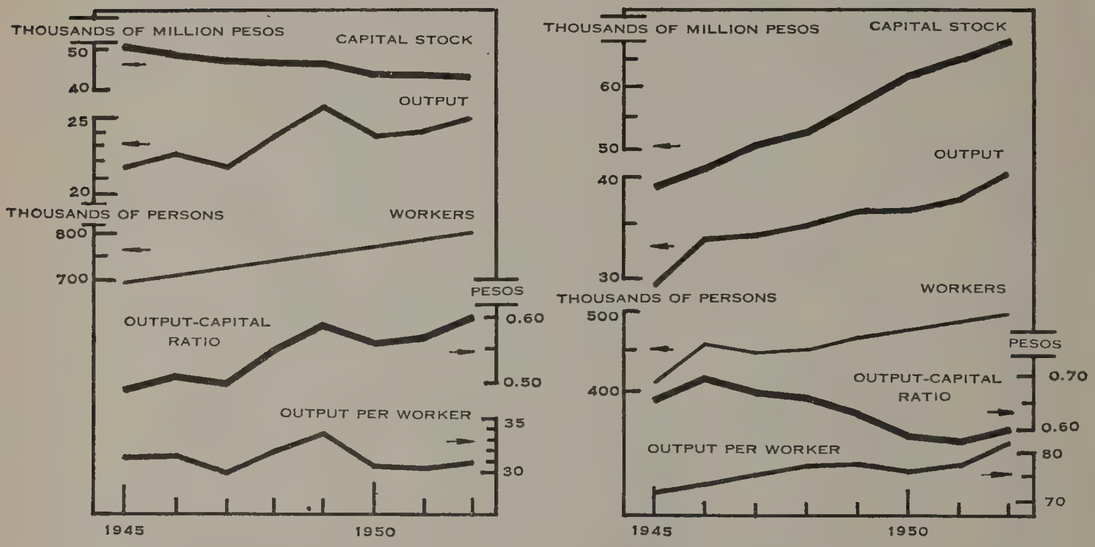
Imports of capital goods and other goods as a percentage of investment and consumption respectively

Plate 23

OUTPUT, CAPITAL STOCK AND PRODUCTIVITY, BY ACTIVITIES, IN CHILE, 1945-52

Pesos at 1950 prices
(Semi-logarithmic scale)

Agriculture *Manufacturing and construction*



Mining *Other activities*

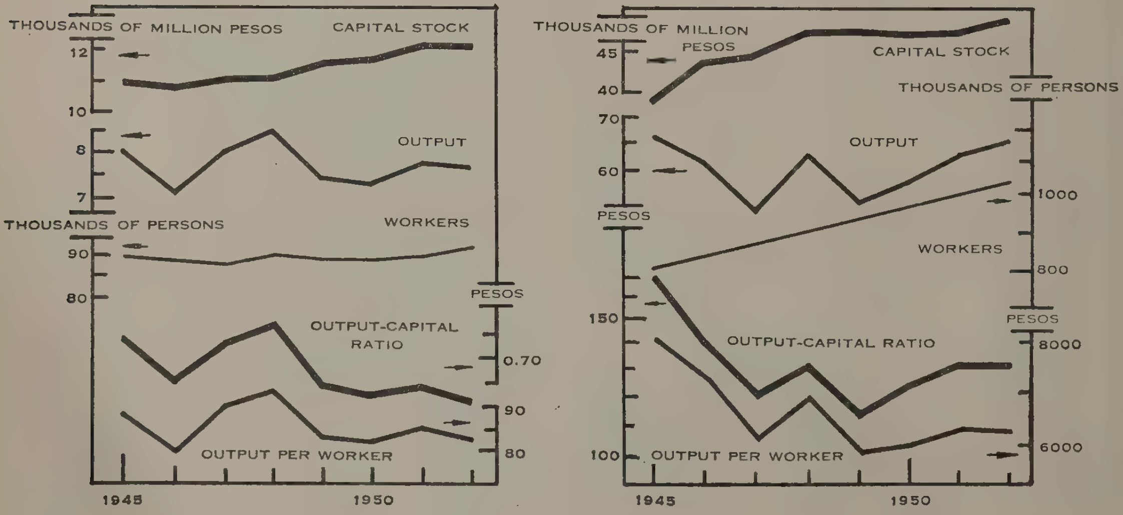
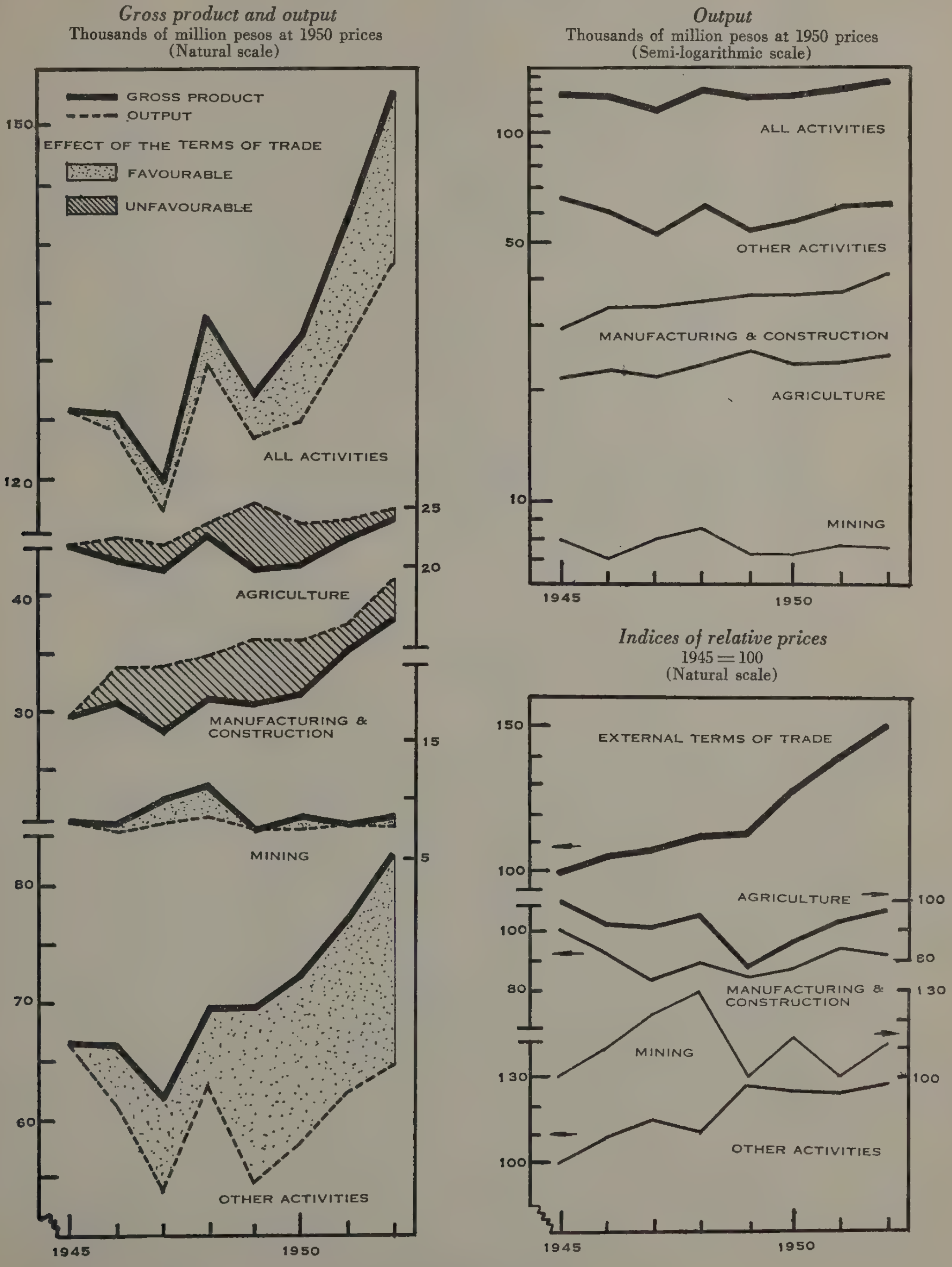


Plate 24

GROSS PRODUCT, OUTPUT AND INDICES OF THE TERMS OF TRADE, BY ACTIVITIES, IN CHILE, 1945-52



Gross product and output
Thousands of million pesos at 1950 prices
(Natural scale)

Output
Thousands of million pesos at 1950 prices
(Semi-logarithmic scale)

Indices of relative prices
1945 = 100
(Natural scale)

in the coefficient of imports of consumer goods suggests that Chile has continued to make active use of this margin, as occurred in the past. This is also true for the effects of the severe import restrictions on certain goods, which for the time being cannot be substituted and which can undoubtedly be postponed.

Table 52. Composition of imports in Chile, 1945–52

Years	*Total imports (thousands of million pesos at 1950 prices)*	*Consumer goods*	*Raw materials*	*Fuel*	*Capital goods*	*Consumer goods*	*Raw materials*	*Fuel*	*Capital goods*
		(thousands of million pesos at 1950 prices)				*(as a percentage of the total)*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1945	21.3	7.8	6.2	2.2	5.1	36.8	29.1	10.4	23.7
1946	25.3	9.0	6.1	3.1	7.1	35.4	24.0	12.4	28.2
1947	28.5	10.7	5.2	3.5	9.1	37.5	18.1	12.3	32.1
1948	26.5	8.5	5.4	4.0	8.6	32.0	20.4	15.0	32.6
1949	29.0	8.2	6.5	3.9	10.4	28.3	22.4	13.4	35.9
1950	24.2	7.4	5.6	2.6	8.6	30.3	23.3	10.8	35.6
1951	28.6	8.8	5.9	4.2	9.7	30.8	20.8	14.5	33.9
1952	30.8	11.2	5.8	3.7	10.1	36.4	18.9	11.9	32.8

Sources and methods

Col. (1): Table 45, col. (4).

Cols. (2), (3), (4) and (5): Col. (1) multiplied by cols. (6), (7), (8) and (9), respectively.

Col. (6), (7), (8) and (9): Based on a tabulation of the quantum of imports in 1948 prices made by the United Nations Economic Commission for Latin America.

Table 53. Relative importance of imports with respect to investment, consumption and available goods and services, in Chile, 1945–52

Years	*Ratio of capital goods to investment*	*Consumer goods*	*Raw materials*	*Fuel*	*Ratio of total imports to available goods and services*
		(as a percentage of consumption)			
	(1)	(2)	(3)	(4)	(5)
1945	38.6	7.4	5.8	2.1	17.8
1946	59.7	8.0	5.4	2.8	20.3
1947	63.6	10.2	5.0	3.4	24.0
1948	51.5	7.6	4.9	3.6	20.7
1949	56.2	7.4	5.8	3.5	22.4
1950	57.0	6.6	5.0	2.3	18.9
1951	57.4	7.3	4.9	3.5	20.8
1952	59.4	8.8	4.5	2.9	21.2

Sources and methods

Col. (1): Table 52, col. (5) as a percentage of table 48, col. (3).

Cols. (2), (3), (4): Table 52, cols. (2), (3) and (4), respectively, as a percentage of table 48, col. (2).

Col. (5): Table 52, col. (1) as a percentage of table 48, col. (1).

Table 54. The gross product, output and relative prices in Chile, 1945–52
(Pesos at 1950 prices)

Years	*Gross product*	*Output*	*Indices of relative prices 1945 = 100*	*Gross product*	*Output*	*Indices of relative prices 1945 = 100*
	(thousands of million pesos at 1950 prices)			*(thousands of million pesos at 1950 prices)*		
	(1)	(2)	(3)	(4)	(5)	(6)
	A. Agriculture			*B. Manufacturing*		
1945.......	21.7	21.7	100.0	29.4	29.4	100.0
1946.......	20.5	22.3	91.9	30.7	33.3	92.2
1947.......	19.6	21.7	90.3	28.2	33.8	83.4
1948.......	22.4	23.5	95.3	30.8	34.8	88.5
1949.......	19.7	25.4	77.6	30.5	36.1	84.5
1950.......	20.0	23.5	85.1	31.4	36.1	87.0
1951.......	22.1	23.9	92.5	35.0	37.4	93.6
1952.......	23.9	24.8	96.4	37.7	41.1	91.7
	C. Mining			*D. Other activities*		
1945.......	8.0	8.0	100.0	66.5	66.5	100.0
1946.......	7.8	7.1	109.9	66.4	61.2	108.5
1947.......	9.7	8.0	121.2	62.0	53.7	115.5
1948.......	11.0	8.5	129.4	69.3	62.8	110.4
1949.......	7.4	7.4	100.0	69.4	54.5	127.3
1950.......	8.3	7.3	113.7	72.2	57.8	124.9
1951.......	7.7	7.7	100.0	77.2	62.3	123.9
1952.......	8.4	7.6	110.5	82.7	64.7	127.8

Sources and methods

For a general discussion of sources and methods see the general note at the end of chapter I, the note to table 12, the note to table 44, cols. (2), (4) and (6), and the note to table 49, col. (1).

Cols. (1), (4): See note to table 44, col. (2).

Cols. (2), (5): Agriculture, manufacturing and construction, mining: see note to table 49, col. (1). Other activities: table 44, col. (6) less output for agriculture, manufacturing and construction, and mining.

Cols. (3), (6): Col. (1) divided by col. (2).

D. Mexico[9]

1. THE RECENT DEVELOPMENT OF MEXICO AND THE PROBLEM OF INCOME DISTRIBUTION

Mexico offers a most interesting field of analysis to research workers in economic growth. The introduction of modernized agriculture alongside traditional forms of this activity, the vigorous progress of industrialization, the high rate of population growth and the social changes inherent in the process of development, among others, fully justify this statement. Yet it is difficult to investigate these problems more thoroughly owing to a lack of systematic data. However, a most important document, from the standpoint of economic research in Latin America, was recently published. This is a report on the economic development of Mexico, prepared jointly by economists of the Mexican Government and by the International Bank for Reconstruction and Development.[10] In addition to its intrinsic merits, the report proves that Latin-American countries can undertake such research seriously and in a scientific spirit. Work of this type is of considerable importance, both in determining and assessing the dynamic factors of a Latin-American economy, and as a means of ensuring its optimum utilization in order to accelerate the rate of development. This report was used in preparing the present chapter and, in addition, certain provisional calculations were made to extend the statistical data to 1952.

Between 1945 and 1952, the annual rate of Mexican growth in the gross product was equivalent to 5.2 per cent, thus raising its gross product in 1952 to 46,100 million pesos at 1950 prices. This implies an annual per capita increase of 2.4 per cent. In order to maintain this rate of development, the country has found it necessary to raise the coefficient of investment substantially. In 1952, the rate of investment, relative to the gross product, was 16.3 per cent.

It is surprising to note that despite the increased coefficient of investment, the rate of Mexican economic development during the past six years was lower than the annual rate of 7.5 per cent recorded for the period 1939-46, when the investment coefficient averaged only 12 per cent.

The reason for this disparity will be found in the fluctuations of the output-capital ratio. During the period 1939-46, the stock of capital was fully employed, since capital goods were difficult to obtain during the war and ample labour surpluses, which agriculture had not absorbed, were available for more intensive utilization of existing capital equipment. Furthermore, Mexico's economy reaped the benefits of earlier large investments in irrigation and road-building which typically require a certain length of time before showing a high rate of utilization. Thus the output-capital ratio was high in that period. From 1946 onward, the ratio has tended to decline. The explanation for this contraction lies in fortuitous factors, which adversely influenced the employment of the existing capacity of productive enterprises, thereby lowering the output-capital ratio. This was accentuated in the post-war period owing to foreign competition in Mexico's industrial sector. In any event, it is natural that when investment could be made more easily, a margin of expansion should be left for future growth of output, although it may temporarily contribute to a decline in the output-capital ratio. Lastly, it should be recalled that during the latter period certain basic investments (which had formerly been neglected) must have been stimulated, which are essential to maintain, if not to accelerate, the rate of development. These new investments were principally directed towards irrigation, transport and manufacturing, where the output-capital ratio is lower, at least in the initial stages.

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[9] The calculations made in this analysis were based on gross product data, valued in terms of pesos at 1950 prices, that is to say, all the gross product series are expressed in constant prices. In this and other connexions, see the general note at the end of chapter I.

[10] *The Economic Development of Mexico and its Capacity to Absorb Foreign Capital*, a report by the Joint Commission of the Government of Mexico and the International Bank for Reconstruction and Development, Mexico. 1952.

In Mexico, the margin for these investments is still very broad. The joint report, mentioned earlier, draws particular attention not only to those investments but to others, such as prospecting and drilling of oil wells, reafforestation and soil conservation measures against erosion. All have a low output-capital ratio at the outset, but are essential in minimizing obstacles to future growth.

In order to carry out new investments, and to maintain others required for the development of its activities, Mexico must raise its investment coefficient still further, especially if the rate of development for the past seven years is to be accelerated. The government has recognized the advisability of the participation of foreign capital, particularly in basic investments by the State. So far, foreign capital has not played a very important role and in 1939-45 it represented 9.4 per cent of total investment, declining slightly in subsequent years. During this period, therefore, domestic saving was the decisive factor in the growth of investment.

Table 55. Population, gross product, output, capital and productivity in Mexico, 1945–52

(Pesos at 1950 prices)

Years	Population (millions) (1)	Gross product (thousands of million pesos) (2)	Effect of the terms of trade since 1945		Output (thousands of million pesos) (5)	Capital (thousands of million pesos) (6)	Output	
			(thousands of million pesos) (3)	(percentage of gross product) (4)			Output-capital ratio (7)	Output per worker (pesos) (8)
1945	22.2	32.3	–	–	32.3	58.5	0.55	4,681
1946	22.8	34.7	0.2	0.6	34.5	61.4	0.56	4,859
1947	23.4	35.6	0.2	0.6	35.4	65.0	0.54	4,849
1948	24.1	37.5	0.4	1.1	37.1	68.8	0.54	4,882
1949	24.8	38.9	−0.1	−0.3	38.9	73.0	0.53	4,924
1950	25.7	43.3	0.1	0.2	43.2	77.3	0.56	5,268
1951	26.3	45.9	0.8	1.7	45.1	83.8	0.54	5,306
1952	26.9	46.1	0.3	0.6	45.8	89.6	0.51	5,264

Sources and methods

Cols. (1), (2), (3), (5) and (6): See general note at the end of chapter I on sources, methods and concepts.

Col. (2): The basic source for the gross product data was *The Economic Development of Mexico, Report of the Combined Mexican Working Party, 1953* (tables 1 and 2), prepared by the IBRD and the Bank of Mexico. Data for 1951 and 1952 are based on preliminary data of the Bank of Mexico. The gross product was expressed in 1950 prices in accordance with the concept and method outlined in the general note at the end of chapter I and in the note to table 12, col. (1).

Col. (3): Based on an index of the terms of trade calculated by the United Nations Economic Commission for Latin America.

Col. (4): Col. (3) as a per cent of col. (2).

Col. (5): The output data are based on indexes of the physical volume of output, by activity, aggregated on the basis of gross product weights in 1945, expressed in 1950 prices. See *The Economic Development of Mexico*, *op. cit.*, table 5. See, also, the general note at the end of chapter I, the note to table 12, col. (2), and the note to col. (2) of this table.

Col. (6): The estimates of the stock of capital in Mexico are based upon the cumulation of gross investment data for a number of years equivalent to one-half of the estimated useful life of the stock of capital; see the general note at the end of chapter I. Investment data for the period 1925–38 are from *Economic Survey of Latin America, 1949*, United Nations, *op. cit.* For the period 1939–50, investment data are from *The Economic Development of Mexico*, *op. cit.*, table 14; the years 1951 and 1952 are by United Nations Economic Commission for Latin America. The estimate of the stock of capital derived by this method is somewhat higher than the estimate of the stock of capital for the year 1940, expressed in 1950 prices, by Emilio Alanis Patiño, Director-General of Statistics; see *Revista de Estadística*, April 1945, Mexico City, Mexico. The implicit gross product deflator was used to express both investment and the stock of capital in 1950 prices. See also the general note at the end of chapter I and the notes to table 20, col. (6), and table 33, col. (6).

Col. (7): Col. (5) divided by col. (6).

Col. (8): Col. (5) divided by the estimated active population. The estimates of the active population are based on the censuses of 1940 and 1950, and an estimate for 1946 by the Bank of Mexico.

Table 56. Movements of external payments which tend to increase or decrease available goods and services in Mexico, 1945–52

(Millions of pesos at 1950 prices)

A. Factors which tend to increase available goods and services

Years	Inflow of foreign capital				Decrease in official monetary reserves	Official short-term credits	Total
	Direct (1)	Short-term (2)	Special official financing (3)	Total (4)	(5)	(6)	(7)
1945	355	136	83	574	–	–	574
1946	87	–	384	471	1,172	–	1,643
1947	444	–	592	1,036	1,105	174	2,315
1948	130	32	227	389	398	138	925
1949	114	–	450	564	–	–	564
1950	368	464	328	1,160	–	8	1,168
1951	73	387	269	729	–	–	729
1952	419	–	412	831	22	79	932

B. Factors which tend to decrease available goods and services

Years	Outflow of foreign capital				Remittance of profits and interest	Increase in official monetary reserves	Decrease in official short-term credits	Total
	Repayment of official loans (8)	Other long-term capital (9)	Short-term capital (10)	Total (11)	(12)	(13)	(14)	(15)
1945	84	..	–	84	522	836	–	1,442
1946	144	..	519	663	547	–	–	1,210
1947	174	..	348	522	809	–	8	1,339
1948	194	..	24	218	625	–	41	884
1949	205	..	229	434	466	344	–	1,244
1950	200	16	–	216	528	1,368	296	2,408
1951	284	51	–	335	284	95	109	823
1952	246	138	57	441	304	–	–	745

C. Net results

Years	Factors of increase (16)	Factors of decrease (17)	Errors and omissions in the total geographic balance of payments (18)	Difference which covers the excess of imports or exports (–) (19)
1945	574	1,442	607	–261
1946	1,643	1,210	634	1,067
1947	2,315	1,339	69	1,045
1948	925	884	–49	–8
1949	564	1,244	124	–556
1950	1,168	2,408	384	–856
1951	729	823	561	467
1952	932	745	–411	–224

Sources and methods

See general note at the end of chapter I on the balance of payments.

1945: Estimated by the United Nations Economic Commission for Latin America, primarily on the basis of *The Economic Development of Mexico, op. cit.*

1946–51: *Balance of Payments Yearbook*, International Monetary Fund.

1952: *International Financial Statistics*, International Monetary Fund, and official, unpublished data.

Col. (2): Includes small amounts of private long-term capital which could not be allocated separately prior to 1950.

Col. (3): Principally United States Export-Import Bank and other loans, and United States grants for foot-and-mouth disease prevention.

Col. (5): Changes in monetary gold; other compensatory official short-term assets; and net use of International Monetary Fund resources.

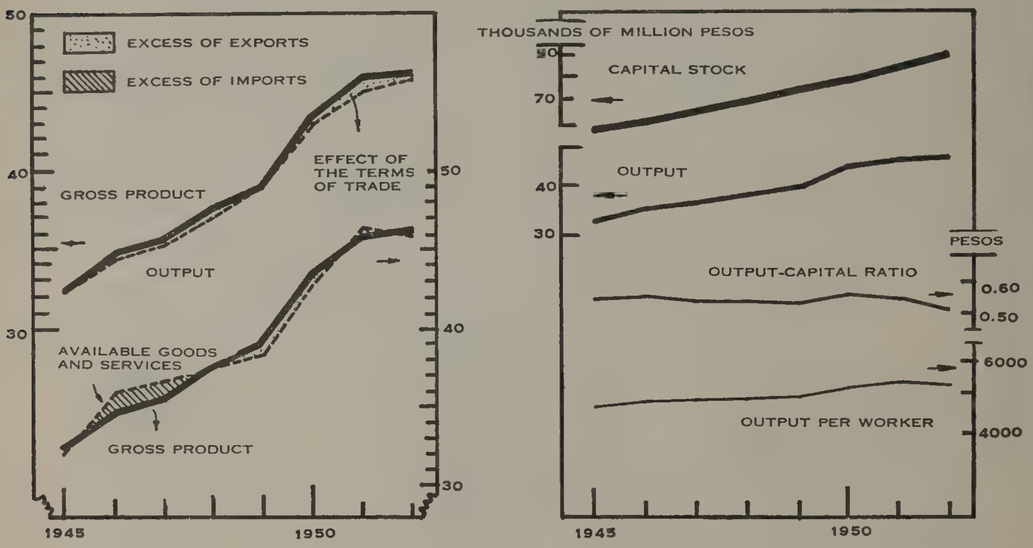
Col. (6): Mainly net changes in United States Stabilization Fund loans, and net financing of payments and clearing agreements.

Col. (8): Includes amortization.

Plate 25

RECENT ECONOMIC DEVELOPMENT OF MEXICO, 1945-52

Thousands of million pesos at 1950 prices



Gross product, output and available goods and services

(Natural scale)

Output, capital stock and productivity

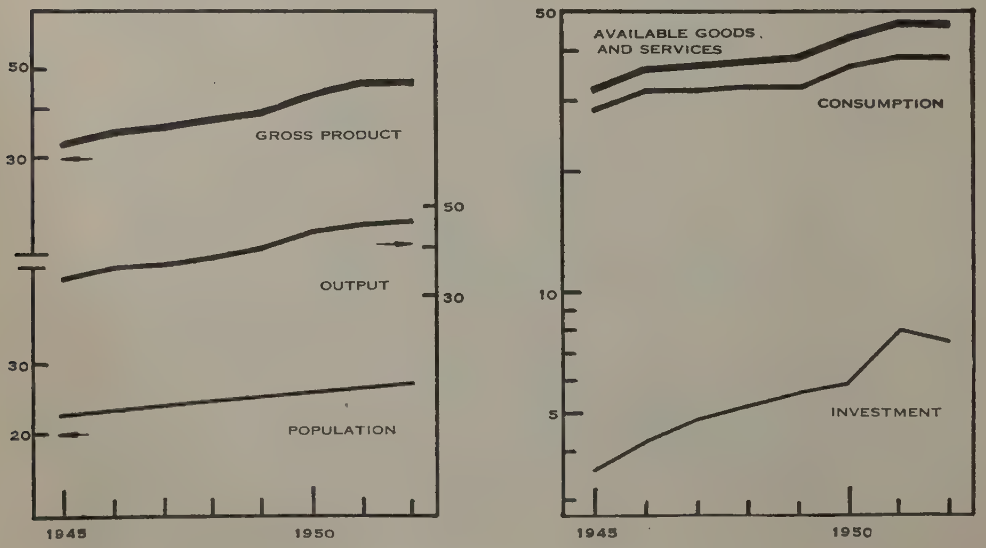
(Semi-logarithmic scale)

Rate of growth of the gross product and of output

(Semi-logarithmic scale)

Available goods and services

(Semi-logarithmic scale)



In Mexico, as in other Latin-American countries, external factors have contributed substantially to improve the ratio of domestic investment to the gross product, but the effect of the terms of trade were weaker in comparison with such factors. However, there has been one element of considerable importance in its effect on saving, namely, the remarkable change in the domestic distribution of income. The income share of groups receiving profits, interest and rent increased exceptionally in relation to the net product,[11] that is, their income increased more than the rest of the community. This extraordinary increase made possible a greater volume of saving, although the rate was not more intense, since more or less the same share of the product was used for private investment as before.

This points to a most important social aspect of economic development. In order to provide a greater incentive for saving in the group earning profits, interest and rent, their consumption had to develop proportionately with saving. The rate of private investment, consequently, permitted an accelerated expansion of consumption in that group, equivalent to an annual average of 8.5 per cent between 1939 and 1952, whereas consumption of the large wage-earning group of employees and small entrepreneurs (including farmers) only increased by 5 per cent annually.

It is generally accepted that the primary purpose of development is to raise the standard of living of the masses. There can be no doubt that in Mexico this objective is gradually being attained. However, this has involved distribution difficulties which are a cause of great concern to the Mexican Government, hampering the already difficult problem of accelerating development, while at the same time taking into account social demands. Hence the emphasis laid on the force of its fiscal policy.

2. THE GROSS PRODUCT, OUTPUT AND AVAILABLE GOODS AND SERVICES

In Mexico, the influence of the terms of trade on the gross product was far weaker than in other Latin-American countries. This may be seen in plate 25 (tables 56 and 57). The first chart emphasizes the slight difference between output and the gross product, arising from the effect of the terms of trade. This effect amounted to only 0.7 per cent of the gross product.

It is evident that the gross product closely reflects the fluctuations of output. Their annual rates rose between 1945 and 1952 by 5.2 and 5.1 per cent, respectively. Reference should now be made to the rate of capital accumulation and the output-capital ratio, which have influenced the fluctuations of output. However, both factors did not exercise the same pressure. While the rate of capital accumulation varied only slightly in 1945-52, the output-capital ratio tended to decline, as may be seen from the following figures:

AVERAGE RATES

	Increment to capital stock	*Output-capital ratio*	*Increment of output*
1945–48	5.6	−0.6	4.7
1948–50	6.0	1.8	7.9
1950–52	6.7	−4.3	3.0

This downward tendency of the output-capital ratio prevented the output per worker from increasing proportionately with the stock of capital. In 1952, the average capital stock per worker was 10,299 pesos, that is, 21.5 per cent more than seven years earlier. Output per worker, conversely, was 5,264 pesos or only 12.4 per cent more than in 1945.

The rate of expansion of available goods and services was equal to that of the gross product. While the latter increased at an annual rate of 5.2 per cent, the growth rate of available goods and services was only 5.3 per cent.

On the other hand, in the distribution of available goods and services between consumption and investment, it will be observed that investment had by far the largest share of the expansion. Its annual rate of increase reached 11.1 per cent between 1945 and 1952, while that of consumption was only 4.4 per cent.

Mexico is in a very different position from the other countries studied above, where the increment to the volume of available goods and services developed more rapidly than that of output, also enabling consumption to rise above the latter. In Mexico, on the other hand, whereas output rose at an annual rate of 5.1 per cent, consumption, as has just been indicated, showed an annual growth rate of only 4.4 per cent.

The impact of these aggregate fluctuations on per capita trends may be seen from the following figures:

PER CAPITA ANNUAL RATES OF GROWTH IN MEXICO, 1945–52

(*Percentages*)

Output	2.3
Gross product	2.4
Available goods and services	2.4
Consumption	1.6
Investment	8.1

It is evident that the growth of per capita consumption in Mexico during the past seven years was relatively low. Averaging an annual growth rate of only 1.6 per cent, it was much less than the increment to output. This resulted from the influence of factors which combined to reduce the consumption share.

The small growth rate in per capita consumption resulted from two opposing trends; namely, the annual per capita decline of 1.6 per cent for the period 1945-49, and an increase of 2.7 per cent annually in 1949-52.

3. THE CAPACITY FOR EXTERNAL PAYMENTS AND INVESTMENTS

It cannot be denied that fluctuations in Mexico's capacity for external payments exercised some influence on investments, as in the case of other countries. However, important domestic factors have also added their weight. In the first place, it would be necessary to examine fluctuations of the capacity for external payments, with reference to plate 26 (tables 59 and 60).

The first chart demonstrates the elements comprising this capacity, and in the second the relationship of this capacity to the gross product is shown. It has already been noted that the effect of the terms of trade was relatively small, being equivalent to only slightly more than half of the proportion of the net inflow of capital. During the seven years under review, the latter item constituted 8.3 per cent of the total capacity for external payments, while the effect of the terms of trade was only 4.4 per cent. The most characteristic feature of Mexico's capacity for external payments is to be found in the growing importance of tourist expenditures. This form of export of services has supplemented the shipment

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[11] The gross product adjusted for depreciation and indirect business taxes.

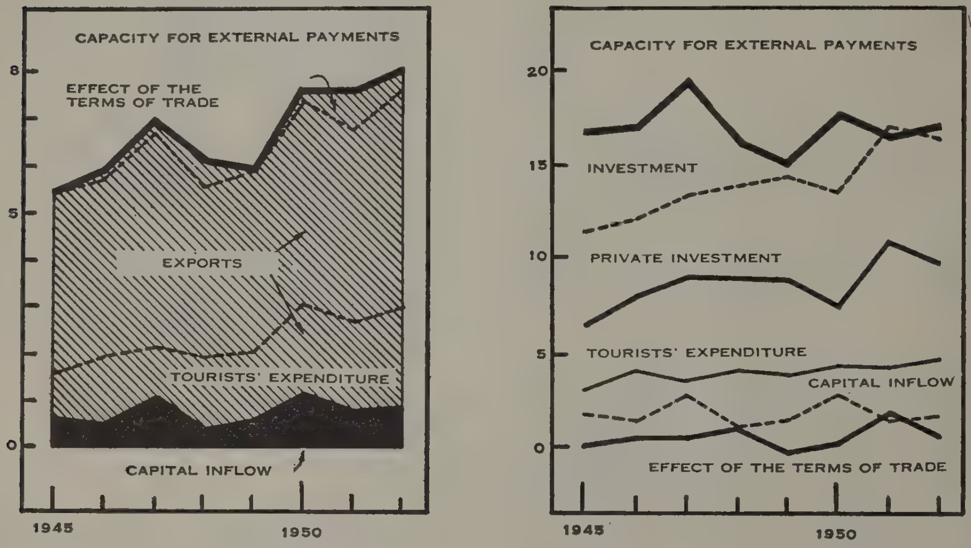
Plate 26

CAPACITY FOR EXTERNAL PAYMENTS, AND THE CAPACITY TO IMPORT AND THEIR INFLUENCE ON INVESTMENT AND IMPORTS, IN MEXICO, 1945-52

(Natural scale)

Thousands of million pesos at 1950 prices

As a percentage of the gross product



Thousands of million pesos at 1950 prices

Thousands of million pesos at 1950 prices

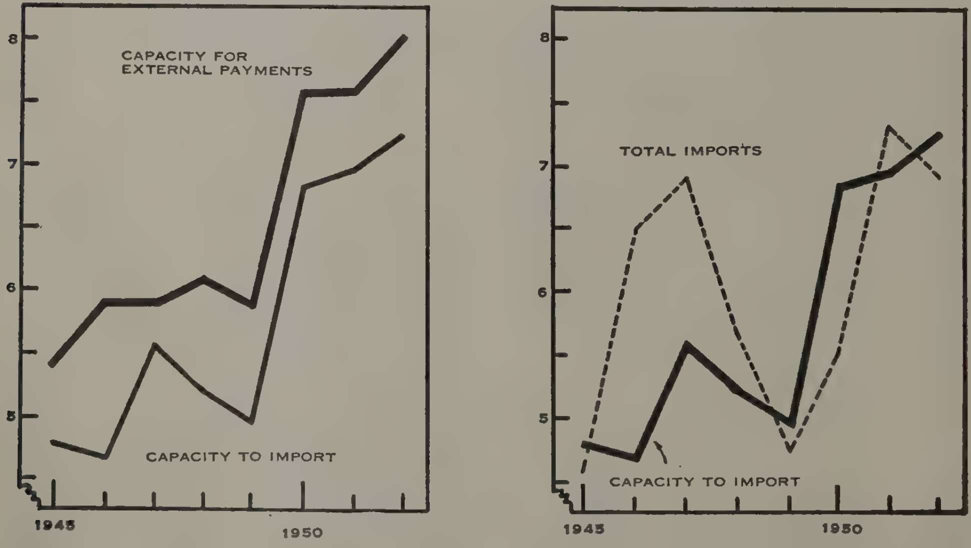


Table 57. Exports and imports of goods and services in Mexico, 1945–52

(Millions of pesos at 1950 prices)

Years	Imports				Exports				Excess of imports or exports (—)
	Goods (1)	Tourism (2)	Other services (3)	Total (4)	Goods (5)	Tourism (6)	Other services (7)	Total (8)	(9)
1945.....	3,885	427	251	4,563	2,924	960	940	4,824	−261
1946.....	5,763	615	106	6,484	3,505	1,460	452	5,417	1,067
1947.....	6,256	557	87	6,900	4,194	1,279	382	5,855	1,045
1948.....	4,844	738	89	5,671	3,830	1,582	267	5,679	−8
1949.....	4,249	400	90	4,739	3,555	1,496	245	5,296	−557
1950.....	4,776	664	112	5,552	4,256	1,912	240	6,408	−856
1951.....	6,480	707	124	7,311	4,526	1,982	335	6,843	467
1952.....	6,031	795	102	6,928	4,788	2,169	195	7,152	−224

Sources and methods

See general note at the end of chapter I on the balance of payments.

For general sources, see notes to table 56.

Col. (1): Mexican imports are mainly registered c.i.f. in the trade returns, but some are registered f.o.b. Since a large share of total imports comes by land from the United States, however, the difference between c.i.f. and f.o.b. values is assumed to be slight. See *Balance of Payments Yearbook 1950–51*, vol. 4, I.M.F., p. 189.

Cols. (2) and (6): Gross totals as reported in the *Balance of Payments Yearbook*. Estimates for 1945 and 1946 are based partly on *The Economic Development of Mexico, op. cit.*

Cols. (3) and (7): Mainly insurance and film royalties.

Col. (5): Includes net movements of non-monetary gold.

abroad of goods, strengthening the capacity for payments substantially and representing 27.2 per cent thereof in 1952 and 4.7 per cent of the gross product.

The ratio between the capacity for external payments and investment may be studied in comparison with the gross product, as shown in the second chart of plate 26. The corresponding curve shows at a glance that this relationship is not so close as in other cases. There is a certain resemblance between the general movements, but it is evident that the coefficient of investment fluctuated less than the capacity for external payments. Moreover, the decline in the coefficient during 1948-50 is not so sharp as the temporary drop in the coefficient of the capacity for external payments. This is partly due to the inclusion of public investment in total investment. From the third curve on this chart, referring exclusively to private investment, it will be seen that the decline in this component was much sharper. In relation the gross product, investment recorded an upward tendency, which was much firmer and more persistent than that of the capacity for external payments. This persistent rise in the investment coefficient is one outstanding result of the changes which have taken place in the composition of available goods and services in Mexico. By increasing the income share of the high income groups, the investment-coefficient for the country as a whole was raised. Further reference to this phenomenon will be made later.

Table 58. The gross product and available goods and services for consumption and investment, in Mexico, 1945–52

(Thousands of million pesos at 1950 prices)

Years	Gross product (1)	Excess of imports or exports (—) (2)	Available goods and services (3)
1945..........	32.3	−0.3	32.0
1946..........	34.7	1.1	35.8
1947..........	35.6	1.0	36.6
1948..........	37.5	—	37.5
1949..........	38.9	−0.6	38.3
1950..........	43.3	−0.8	42.5
1951..........	45.9	0.5	46.4
1952..........	46.1	−0.2	45.9

Sources and methods

Col. (1): Table 55, col. (2).

Col. (2): Table 57, col. (9).

Col. (3): Col. (1) plus col. (2).

4. THE CAPACITY TO IMPORT, IMPORTS OF CAPITAL AND OTHER GOODS

The fluctuations of the capacity to import, and of imports and their distribution as between capital and other goods may now be analysed. As might be expected, the capacity to import closely follows the fluctuations of the capacity for external payments (chart 3), showing a tendency to increase in importance relative to the former. Thus, the capacity to import rose from 79.4 per cent of the total capacity for external payments in 1946, to 90.7 per cent thereof in 1952. This is due to the fact that the remittances of profits and interest remained at the same level, whereas total capacity was rising.

The capacity to import by no means represents a rigid limit to imports of goods and services. In the period under review, Mexico's imports exceed the capacity to import for some years, particularly in 1949. This pressure of imports, it should be remembered, was one of the factors which led to devaluation in both 1948 and 1949. These devaluations, the increase of export taxes and certain selective measures, particularly those affecting imports of luxury consumer goods, helped to compress imports within the limits of the capacity to import. Nevertheless, there were certain deviations, such as in 1950, when imports were lower than the capacity to import, compensated partly by years such as 1951, when imports exceeded that capacity. This is a typical instance of temporary measures taken in order to correct disequilibrium in the balance of payments. At the same time, it also illustrates how such measures induce structural changes which, for a while, permit a country to progress without developing new problems of disequilibrium.

Table 59. Total capacity for external payments, capacity to import and imports, in Mexico, 1945–52

(Millions of pesos at 1950 prices)

Years	A. Total capacity for external payments					B. Capacity to import					
	Exports (1)	Inflow of foreign capital (2)	Total capacity for external payments (3)	Effect of the terms of trade since 1945 (4)	Effect of the terms of trade, as percentage of total capacity (5)	Total capacity for external payments (6)	Remittance of profits and interest (7)	Outflow of foreign capital (8)	Capacity to import: Absolute figures (9)	Capacity to import: Percentage of total capacity (10)	Imports of goods and services (11)
1945.....	4,824	574	5,398	–	–	5,398	522	84	4,792	88.8	4,563
1946.....	5,417	471	5,888	157	2.7	5,888	547	663	4,678	79.4	6,484
1947.....	5,855	1,036	6,891	206	3.0	6,891	809	522	5,560	80.7	6,900
1948.....	5,679	389	6,068	378	6.2	6,068	625	218	5,225	86.1	5,671
1949.....	5,296	564	5,860	−57	−1.0	5,860	466	434	4,960	84.6	4,739
1950.....	6,408	1,160	7,568	68	0.9	7,568	528	216	6,824	90.4	5,552
1951.....	6,843	729	7,572	852	11.2	7,572	284	335	6,953	91.8	7,311
1952.....	7,152	831	7,983	327	4.1	7,983	304	441	7,238	90.7	6,928

Sources and methods

Col. (1): Table 57, col. (8).
Col. (2): Table 56, col. (4).
Col. (3): Col. (1) plus col. (2).
Col. (4): Table 55, col. (3).
Col. (5): Col. (4) as a percentage of col. (3).
Col. (6): Col. (3).
Col. (7): Table 56, col. (12).
Col. (8): Table 56, col. (11).
Col. (9): Col. (6) less cols. (7+8).
Col. (10): Col. (9) as a percentage of col. (6).
Col. (11): Table 57, col. (4).

The scope of this report precludes a detailed analysis of the present structural changes, which should be studied in a separate document. Some of these trends however must be mentioned. Thus the fourth chart of plate 27 (table 61) shows a declining curve in the coefficient of imports of capital goods with respect to total investments. It would be interesting to consider whether this represented merely a change in the composition of investment, or whether it was due to a growth in those domestic industries producing capital goods. In 1952, the ratio of imports of other goods to total consumption was less than in 1946-47, and it may be concluded that the general trend of the curve suggests a downward tendency. The same might be said of the coefficient of total imports, shown in the above chart, combining the two partial coefficients already discussed. From another point of view, the greater capacity to import in 1952, as compared with 1945, increased the coefficient of imports relative to available goods and services. Assuming the gross product continues to expand, it would be of interest to know what margin of additional substitution might be effected, if, as happened in the past, the capacity to import again becomes inadequate.

Table 60. The ratio of the capacity for external payments and investments to the gross product, in Mexico, 1945–52

Years	Capacity for external payments	Investment	Capacity for external payments	Investments
	Absolute figures (thousands of million pesos at 1950 prices)		(as a percentage of the gross product)	
	(1)	(2)	(3)	(4)
1945.......	5.4	3.6	16.7	11.1
1946.......	5.9	4.2	17.0	12.1
1947.......	6.9	4.8	19.4	13.5
1948.......	6.1	5.2	16.3	13.9
1949.......	5.9	5.6	15.2	14.4
1950.......	7.6	5.9	17.6	13.6
1951.......	7.6	8.0	16.6	17.0
1952.......	8.0	7.5	17.4	16.3

Sources and methods

Col. (1): Table 59, col. (3).
Col. (2): Table 61, col. (3).
Col. (3): Col. (1) as a percentage of table 55, col. (2).
Col. (4): Col. (2) as a percentage of table 55, col. (2).

5. OUTPUT, THE GROSS PRODUCT AND THE TERMS OF TRADE BY ACTIVITIES

The first observation seen from the charts in plate 28 (table 62) is the parallel trend existing between the growth of Mexico's total output of goods and services, and the output of the various component activities. With the exception of mining, output increased at an annual rate of 5 per cent or more, between 1945 and 1952, in manufacturing, agriculture and other activities respectively.

Manufacturing, including construction, has played an important role in this increase, even though its rate of growth in 1952 was lower than in earlier years. The latter was due to certain industries, such as textiles, which were operating well below capacity.

Agriculture, to a somewhat greater extent, also experienced a reduction in its rate of growth by the end of the period. By 1952, output had returned to the level achieved in 1950.

The case of mining is different. Despite a strong stimulus in the last three years, resulting from an improvement in world demand and more favourable terms of trade, the annual growth rate between 1945 and 1952 was only 2.8 per cent.

Within the wide grouping of other activities, which in 1952 comprised 55.3 per cent of the gross product, the rate of growth has very closely paralleled that of total output, namely 5.2 per cent annually.

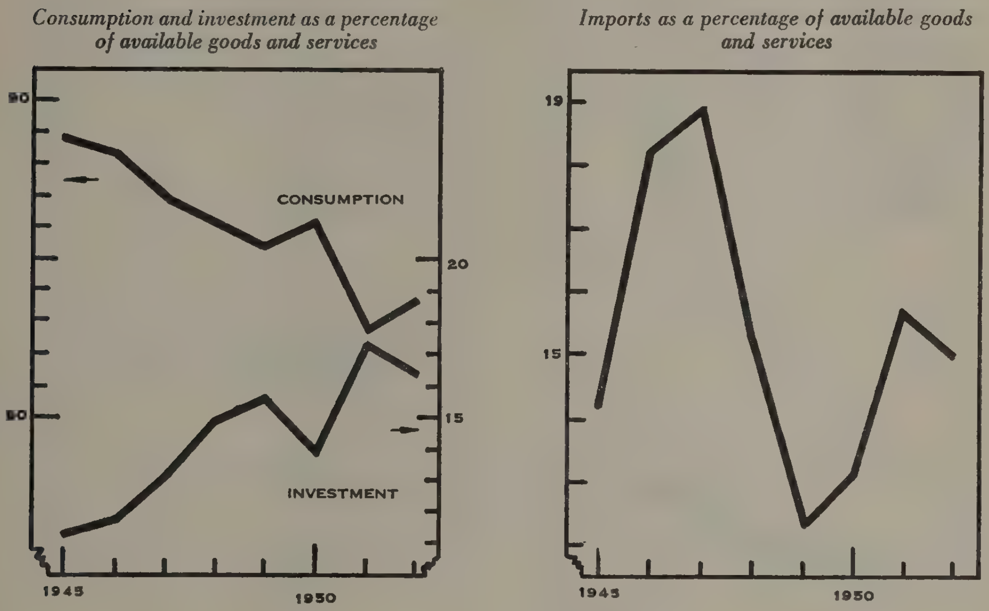
6. EFFECTS OF CHANGES IN THE DISTRIBUTION OF THE GEOGRAPHIC INCOME ON SAVING AND INVESTMENT

It has been shown elsewhere in this chapter that although the coefficient of investment in Mexico was

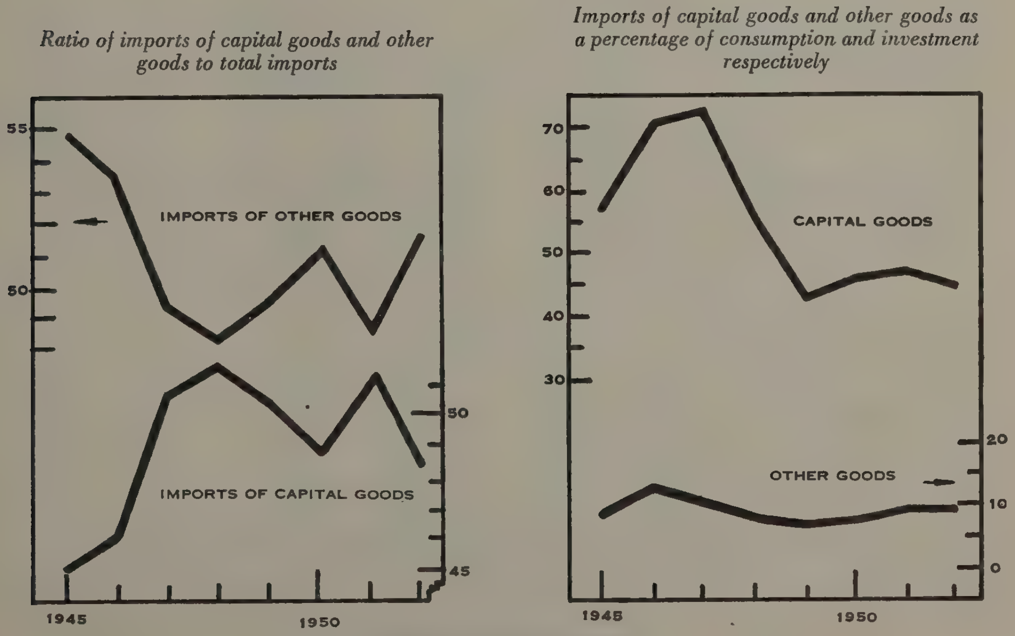
Plate 27

RELATIONSHIP BETWEEN AVAILABLE GOODS AND SERVICES, CONSUMPTION AND INVESTMENT, AND IMPORTS, IN MEXICO, 1945-52

(Natural scale)


Consumption and investment as a percentage of available goods and services

Imports as a percentage of available goods and services


Ratio of imports of capital goods and other goods to total imports

Imports of capital goods and other goods as a percentage of consumption and investment respectively

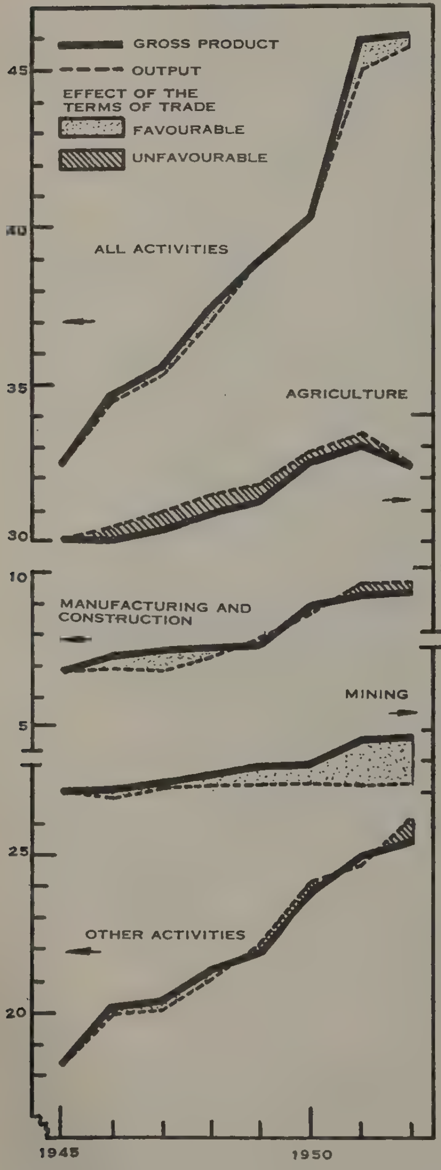
Economic Commission for Latin America

Plate 28

GROSS PRODUCT, OUTPUT AND INDICES OF THE TERMS OF TRADE, BY ACTIVITIES, IN MEXICO, 1945-52

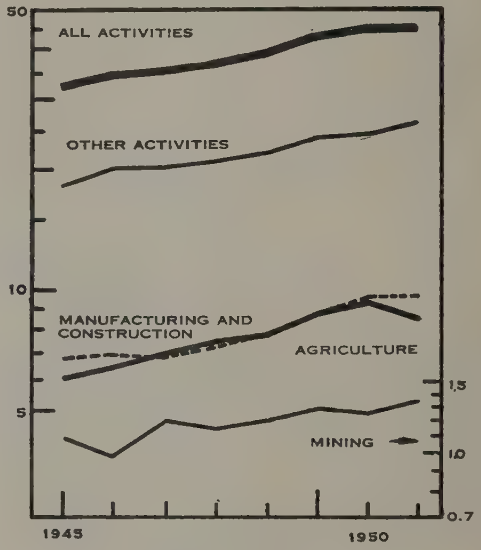
Gross product and output

Thousands of million pesos at 1950 prices
(Natural scale)



Output

Thousands of million pesos at 1950 prices
(Semi-logarithmic scale)



Indices of relative prices

1945 = 100
(Natural scale)

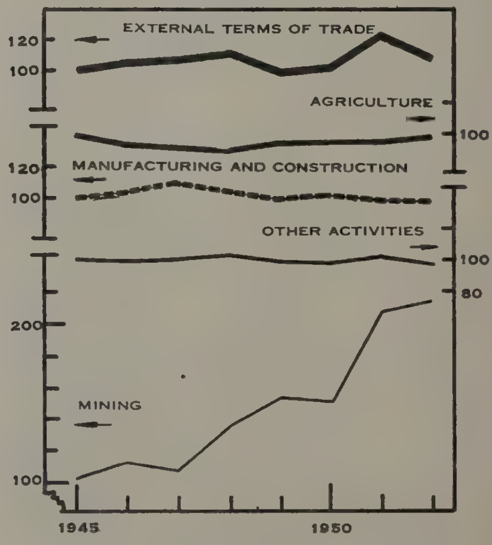


Table 61. Available goods and services, consumption and investment in Mexico, 1945–52

(Pesos at 1950 prices)

Years	Total available goods and services	Consumption	Investment	Ratio to the total: Consumption	Ratio to the total: Investment	Per capita: Total available goods and services	Per capita: Consumption	Per capita: Investment
	(thousands of million pesos)			(percentage)		(pesos)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1945	32.0	28.4	3.6	88.8	11.2	1,441	1,279	162
1946	35.8	31.6	4.2	88.3	11.7	1,570	1,386	184
1947	36.6	31.8	4.8	86.9	13.1	1,564	1,359	205
1948	37.5	32.3	5.2	86.1	14.9	1,556	1,340	216
1949	38.3	32.7	5.6	85.4	14.6	1,544	1,318	226
1950	42.5	36.6	5.9	86.1	13.9	1,654	1,424	230
1951	46.4	38.4	8.0	82.8	17.2	1,764	1,460	304
1952	45.9	38.4	7.5	83.6	16.4	1,706	1,427	279

Sources and methods

Col. (1): Table 58, col. (3).
Col. (2): Col. (1) less col. (3).
Col. (3): See note to table 55, col. (6).
Col. (4): Col. (2) as a percentage of col. (1).
Col. (5): Col. (3) as a percentage of col. (1).
Col. (6): Col. (1) divided by table 55, col. (1).
Col. (7): Col. (2) divided by table 55, col. (1).
Col. (8): Col. (3) divided by table 55, col. (1).

Table 62. The gross product, output, and relative prices, by activities, in Mexico, 1945–52

Years	Gross product	Output	Indices of relative prices 1945=100	Gross product	Output	Indices of relative prices 1945=100	Gross product	Output	Indices of relative prices 1945=100
	(millions of pesos at 1950 prices)			(millions of pesos at 1950 prices)			(millions of pesos at 1950 prices)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	A. All activities			*B. Agriculture*			*C. Mining*		
1945	32,301	32,301	100.0	6,072	6,072	100.0	1,098	1,098	100.0
1946	34,690	34,533	104.9	6,032	6,445	93.6	1,110	983	112.9
1947	35,574	35,368	106.1	6,403	6,996	91.5	1,281	1,197	107.0
1948	37,472	37,094	110.4	6,894	7,537	90.9	1,574	1,152	136.6
1949	38,880	38,937	98.5	7,308	7,824	93.4	1,827	1,191	153.4
1950	43,299	43,231	101.6	8,486	8,872	95.6	1,949	1,290	151.1
1951	45,940	45,088	121.6	9,028	9,493	95.1	2,622	1,264	207.4
1952	46,124	45,797	107.3	8,389	8,517	98.5	2,856	1,329	214.9

Years	Gross product	Output	Indices of relative prices 1945=100	Gross product	Output	Indices of relative prices 1945=100
	(millions of pesos at 1950 prices)			(millions of pesos at 1950 prices)		
	(10)	(11)	(12)	(13)	(14)	(15)
	D. Manufacturing and construction			*E. Other activities*		
1945	6,815	6,815	100.0	18,316	18,314	100.0
1946	7,285	6,959	104.7	20,259	20,146	100.6
1947	7,469	6,814	109.6	20,421	20,362	100.3
1948	7,606	7,255	104.8	21,398	21,150	101.2
1949	7,698	7,815	98.5	22,047	22,107	99.7
1950	8,919	8,815	101.2	23,945	24,253	98.7
1951	9,277	9,614	96.5	25,019	24,717	101.2
1952	9,377	9,717	96.5	25,502	26,234	97.2

Sources and methods

See general note at the end of chapter I, the note to table 12, and the note to table 55, cols. (2) and (5), for a discussion of sources, methods and concepts.

Cols. (1), (4), (7), (10) and (13): See note to table 12, col. (1).
Cols. (2), (5), (8), (11) and (14): See note to table 12, col. (2).
Cols. (3), (6), (9), (12) and (15): See note to table 12, col. (3).

greatly influenced, as in other countries, by the coefficient for external payments, it increased at a higher rate than the latter during the period 1945-52. This disparity in development gave rise to two problems, namely, the manner in which increased investment affected the capacity for external payments, and the form in which domestic savings increased to finance such investment.

With respect to the former, it was noted that the ratio of imports of capital goods to total investments decreased, thus reducing the pressure of investment on the capacity for external payment. However, the second problem may now be considered, since its interest is not limited to Mexico alone but focuses on an aspect of the theory of development which could not yet be fully studied in Latin America.

The increase in the coefficient of investment, from the standpoint of savings required to effect such investment, can be explained in two ways. First of all, by the rapid increase of the gross product which, since it has not had sufficient time to modify buying habits, tends to augment savings more rapidly than consumption. The reverse occurs when there are sudden decreases of the gross product. In this way, by their influence on the gross product, fluctuations in the capacity for external payment affect investment. Apart from the inflow of foreign capital, the effects of which are obvious, there are other types of fluctuations caused by external factors which not only affect the gross product of the activities concerned, but influence other activities as well.

Fluctuations in the coefficient of investment may also be due to changes occurring in the domestic distribution of the geographic income. If this distribution is modified in favour of groups with a higher propensity to save, it is obvious that total saving will tend to increase whether or not the gross product expands. In Mexico there appears to have been a combination of both phenomena. Reference has already been made to the developments in the capacity for external payments. The influence of domestic changes in the distribution of income should therefore be studied.

The report prepared by the Joint Commission of the Mexican Government and the International Bank of Reconstruction and Development contains some very interesting data in this connexion, which were used as a basis for plate 29, certain provisional figures estimated for the last two years being added to it. For analytical purposes, it is convenient to consider two groups within the geographic income sector:[12] one comprising all salary and wage-earners and small entrepreneurs (including farmers) and another consisting of those receiving profits, interest and rent. In the former group, the low income sector of the population predominates, whereas in the second group, incomes are relatively high. It was believed advisable to use 1939 as a point of departure in the analysis, since the longer interval provides a better perspective for making comparisons.

A remarkable trend is observed from these data. Whereas wages, salaries and incomes of the small entrepreneurs increased at an annual rate of 4.4 per cent between 1939 and 1952, profits, interest and rent rose 10.1 per cent. The proportion of the latter to the geographic income thus rose from 34.5 per cent in 1939 to 51.2 per cent in 1952, whereas the former declined from 65.5 per cent to 48.8 per cent over the same period. These changes may be seen in the corresponding curves of the first chart in plate 29.

However, the rate of increase was not uniform throughout the period. The highest rate of expansion of profits, interest and rent was that prevailing until 1946. Subsequently, and until 1949, this portion of the product developed very slowly, but in the past three years the rate increased again, reaching a figure similar to that of the earlier phase.

Thus far, only a general picture has been drawn of the social aspects of Mexican inflation. These two curves indicate approximately the changes brought about in income distribution, there being no doubt that these alterations were greatly influenced by inflation. This fact will be confirmed by glancing at the third chart, where the trend of profits of available goods and services for the group receiving interest and rent will be seen to follow the index of retail prices, both generally and in the phases indicated. It should be noted that this index is a fairly satisfactory reflection of the alternations in inflationary pressure.

It would be well to enquire into the repercussions of these changes in the distribution of the geographic income on savings and investment. Unfortunately, no data are available to enable the same grouping to be made as in the case of the gross product. It was therefore necessary to resort to a method which seems appropriate to the objective pursued, namely, of assuming that all private investment was made by the group receiving profits, interest and rent. Obviously, although all private investments were not made by this group, the major portion must have been. Hence, it is probably being assigned a slightly higher volume of savings and lower level of consumption than was actually the case. This, however, tends to strengthen rather than invalidate the following conclusions.

The curves of investment and consumption in this group were plotted by this procedure in the third chart. It is evident that in the first phase of intensive increase of available goods and services, there was no striking upward movement of investment. The latter did rise, but at a lower rate than available goods and services. On the other hand, consumption expanded more rapidly,

During the first three years 1939-41, some 19 per cent of the available goods and services were directed to investment by this group, and the remainder to its consumption. During 1942-46, the proportion fluctuated at about 15 per cent, and since then has tended to rise. During 1950 and 1951 the earlier levels were regained. By 1952 they were finally surpassed, with 22.6 per cent of the available goods and services of this group directed towards investment.

Although the imperfection of the data is fully recognized, together with the crudity of the procedure, it does seem that the remarkable expansion of income in this group should have generally led its members to increase their saving-coefficient. This was not the case. On the contrary, for a considerable time they delayed the re-establishment of the relative share of investment in the expenditure of their income.

Nevertheless, Mexico obtained a substantial increase in private investment, and thereby in output, by this means. Investment rose at an annual rate of 10.7 per cent between 1939 and 1952. However, in attaining this result, consumption by the group receiving profits, interest and rent increased almost proportionately, that is, at an annual rate of 8.6 per cent. Over the same period, the volume

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[12] Gross product excluding indirect taxes and depreciation reserves.

Plate 29

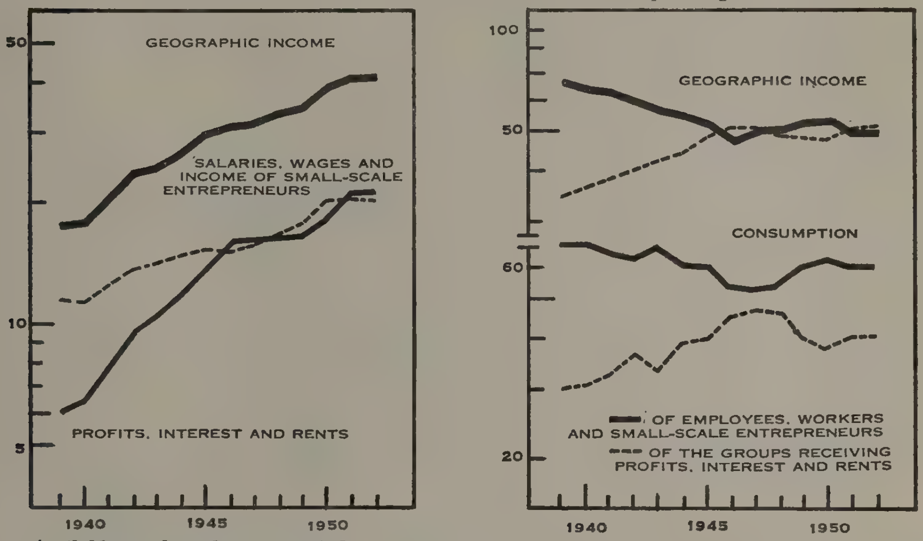
DISTRIBUTION AND UTILIZATION OF THE GROSS PRODUCT IN CONSUMPTION AND INVESTMENT IN MEXICO, 1939-52

Thousands of million pesos at 1950 prices
(Semi-logarithmic scale)

Geographic income and its distribution between the two major social groups

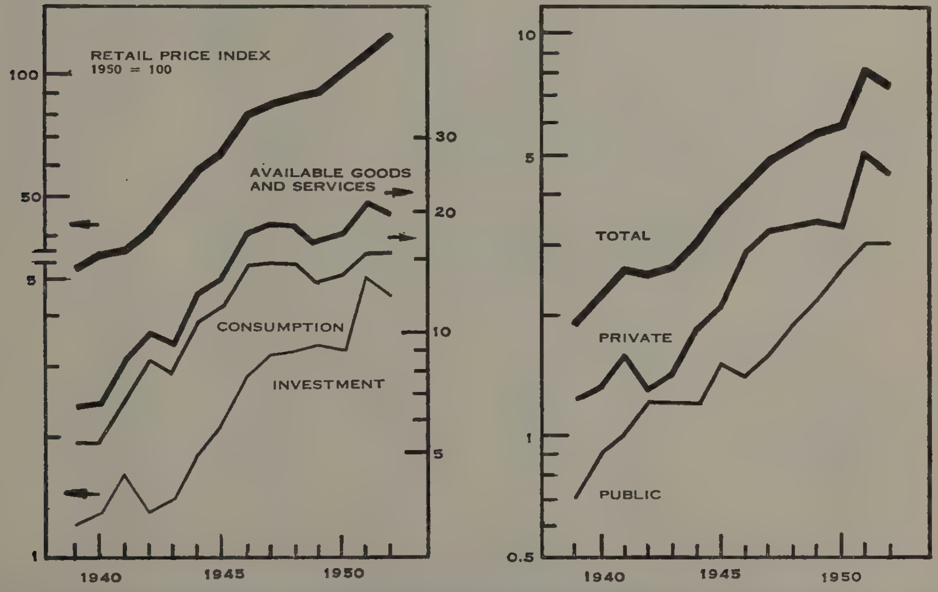
Distribution of the geographic income and consumption between the two major social groups

As a percentage of the total



Available goods and services of the group receiving profits, interest and rents, and its distribution in consumption and investment

Total investment and its distribution in private and public sectors



Source: The Economic Development of Mexico and its Capacity to Absorb Foreign Capital, The Joint Commission of the Government of Mexico and the International Bank for Reconstruction and Development, Mexico, 1952.

of consumption of the low-income group, assuming that it had expanded in a measure with their income, rose by 5 per cent annually on the average.

This difference in the trend of consumption of both groups may be readily seen in the second chart of plate 29. There were different phases in the course of the process, which are closely related with the share of each group in relation to the geographic income. Hence it will be noted that the share of consumption in the group consisting of employees, wage-earners and small entrepreneurs declined until 1946, while that of the other group moved upward, following the improvement of the gross product. The relative deterioration of consumption in the first group was later checked, rising again in 1948-50, only to decline in the next two years. It would be of interest to examine the manner in which the fluctuations of domestic inflationary pressure and other factors influenced these events. This, however, is not the most opportune moment for such a study. Be that as it may, employees, labourers and small entrepreneurs accounted for 69.7 per cent of total consumption in 1939, and only 59.9 per cent in 1952.

7. THE POSITION OF THE STATE IN SAVINGS AND INVESTMENT

The main thread of the argument will now be reconsidered. An attempt has been made to ascertain the effects on investment of the changes in the distribution of the geographic income. It was seen that the coefficient of saving of the group obtaining the greatest advantage from the shift in income distribution, did not improve. Instead, the savings coefficient tended to decrease over most of the period under review. It remains to assess the direct influence exerted by the State on savings and investment. State expenditure increased in relation to the gross product, rising from 12.4 per cent thereof in 1939 to 14.3 per cent in 1952. However, within that expenditure, the amount set aside for investments developed much more rapidly than current expenditure. Whereas the former accounted for 26.9 per cent of total expenditure in 1939, by 1952 it averaged 54.5 per cent. Current account expenditures conversely decreased from 73.1 per cent to 45.5 per cent, respectively, during the years specified. This indicates that the Mexican Government improved the coefficient for savings remarkably. In fact, Mexico is one of the countries in which the State has shown a strong investment capacity, as may be seen above.

It might be considered that the government reached this position by requisitioning a substantial proportion of the geographic income of the group receiving profits, interest and rent. That was not the case. The share of net income, accruing to the State from the group receiving profits, interest and rent, was comparatively low and fluctuated widely. From 11.7 per cent in 1939, direct taxes fell to

Table 63. Composition of imports in Mexico, 1945–52

Years	*Total imports*	*Consumer goods*	*Raw materials*	*Fuel*	*Capital goods*	*Consumer goods*	*Raw materials*	*Fuel*	*Capital goods*
	(millions of pesos at 1950 prices)					*(percentage of total imports)*			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1945......	4,563	1,497	890	114	2,062	32.8	19.5	2.5	45.2
1946......	6,484	2,159	1,161	156	3,008	33.3	17.9	2.4	46.4
1947......	6,900	2,208	994	207	3,491	32.0	14.4	3.0	50.6
1948......	5,671	1,548	964	233	2,926	27.3	17.0	4.1	51.6
1949......	4,739	1,251	877	223	2,388	26.4	18.5	4.7	50.5
1950......	5,552	1,566	1,055	222	2,709	28.2	19.0	4.0	48.8
1951......	7,311	2,208	1,170	182	3,751	30.2	16.0	2,5	51.3
1952......	6,928	2,106	1,199	270	3,353	30.4	17.3	3.9	48.4

Sources and methods

Col. (1): Table 57, col. (4).

Cols. (2), (3), (4) and (5): Col. (1) multiplied by cols. (6), (7), (8) and (9), respectively.

Cols. (6), (7), (8) and (9): Based on a tabulation of the quantum of imports in 1948 prices, made by the United Nations Economic Commission for Latin America.

Table 64. Relative importance of the components of imports, with respect to available goods and services in Mexico, 1945–52,

Years	*Capital goods (as a percentage of investment)*	*Consumer goods*	*Raw materials*	*Fuel*	*Total imports (as a percentage of available goods and services)*
		(as a percentage of consumption)			
	(1)	(2)	(3)	(4)	(5)
1945..............	57.2	5.3	3.2	0.4	14.2
1946..............	71.4	7.0	3.8	0.5	18.2
1947..............	72.9	6.9	3.1	0.6	18.9
1948..............	55.8	4.6	3.0	0.6	15.2
1949..............	42.9	3.8	2.7	0.6	12.3
1950..............	45.8	4.3	2.9	0.5	13.1
1951..............	46.9	5.7	3.1	0.5	15.7
1952..............	44.7	5.5	3.1	0.7	15.0

Sources and methods

Col. (1): Table 63, col. (5) as a percentage of table 61, col. (3).

Cols. (2), (3) and (4): Table 63, cols. (2), (3) and (4), respectively, as a percentage of table 61, col. (2).

Col. (5): Table 63, col. (1) as a percentage of table 61, col. (1).

8.4 per cent in 1942; they rose again to 12.5 per cent in 1943 (as a result of the fiscal reform), dropping, however, to less than 8 per cent in 1947 and 1948. In 1949 they increased again reaching 12.7 per cent, subsequent to the new fiscal measures in 1949, but were reduced immediately afterward. It would seem that the increases in direct taxes are being rapidly annulled by the inflationary increment to the geographic income. In any event, the resources thus obtained with respect to private investment during 1952 yielded a coefficient of saving of 20 per cent, while in the sphere of state investment, this coefficient reached almost 50 per cent for the same year.

Table 65. Available goods and services, and their distribution between consumption and investment in Mexico, 1939–52

(Thousands of million pesos at 1950 prices)

Years	*Available goods and services*						
		Consumption			*Investment*		
	Total (1)	*Employees, wage-earners, and small entrepreneurs* (2)	*Groups receiving profits, interest, and rent* (3)	*Total* (4)	*Private* (5)	*Public* (6)	*Total* (7)
1939	19.4	12.2	5.3	17.5	1.2	0.7	1.9
1940	19.5	12.0	5.3	17.3	1.3	0.9	2.2
1941	23.4	14.8	6.8	20.8	1.6	1.0	2.6
1942	25.8	14.8	8.5	23.3	1.3	1.2	2.5
1943	26.3	15.8	7.9	23.7	1.4	1.2	2.6
1944	29.8	16.4	10.4	26.8	1.8	1.2	3.0
1945	32.0	17.0	11.4	28.4	2.1	1.5	3.6
1946	35.8	17.1	14.5	31.6	2.8	1.4	4.2
1947	36.6	16.9	14.9	31.8	3.2	1.6	4.8
1948	37.5	17.5	14.8	32.3	3.3	1.9	5.2
1949	38.3	19.6	13.1	32.7	3.4	2.2	5.6
1950	42.5	22.7	13.9	36.6	3.3	2.6	5.9
1951	46.4	23.0	15.4	38.4	5.0	3.0	8.0
1952	45.9	23.0	15.4	38.4	4.5	3.0	7.5

Sources and methods

Cols. (1), (4) and (7): For years 1945–52, table 61, cols. (1), (2) and (3). For other years, by United Nations Economic Commission for Latin America, based on the same sources and methods as for the years 1945 and 1946.

Col. (2): Consumption of workers, small entrepreneurs and their families, which are assumed to be equivalent to the income of these groups. See *The Economic Development of Mexico, op. cit.*, tables 2 and 4. For the years 1951 and 1952, estimates are by United Nations Economic Commission for Latin America.

Col. (3): Col. (4) less col. (2).

Cols. (5) and (6): See *The Economic Development of Mexico, op. cit.*, table 14. For the years 1951 and 1952, estimates are by United Nations Economic Commission for Latin America.

Table 66. Government expenditures for investment and consumption in Mexico, 1939–52

(Thousands of million pesos at 1950 prices)

Years	*Government expenditures*				
		Investment		*Consumption*	
	Total (1)	*Absolute figures* (2)	*Percentage of total* (3)	*Absolute figures* (4)	*Percentage of total* (5)
1939	2.6	0.7	26.9	1.9	73.1
1940	2.9	0.9	31.0	2.0	69.0
1941	2.9	1.0	34.5	1.9	65.5
1942	3.1	1.2	38.7	1.9	61.3
1943	3.1	1.2	38.7	1.9	61.3
1944	3.1	1.2	41.9	1.9	58.1
1945	3.7	1.5	40.5	2.2	59.5
1946	3.2	1.4	43.8	1.8	56.2
1947	3.8	1.6	44.7	2.2	55.3
1948	4.1	1.9	46.3	2.2	53.7
1949	4.7	2.2	46.8	2.5	53.2
1950	5.4	2.6	48.1	2.8	51.9
1951	6.0	3.0	50.0	3.0	50.0
1952	6.6	3.0	45.5	3.6	54.5

Sources and methods

1939–50: Based on *The Economic Development of Mexico, op. cit.*, see tables 17, 18 and 116.

1951 and 1952: Estimates by the United Nations Economic Commission for Latin America, based on official data.

Part II

THE IMPACT OF RECENT WORLD ECONOMIC EVENTS ON LATIN AMERICA

Chapter I

EFFECTS OF REARMAMENT AND OF FLUCTUATIONS OF DEMAND IN INDUSTRIAL COUNTRIES

1. Recent economic events in industrial countries

The course of events during the past three years has once again emphasized the influence of economic fluctuations in industrial countries upon the domestic economies of Latin America. Recent expenditures on defence and on private investment in the United States and leading Western European countries have brought about sharp changes in demand, which, depending upon the availability of raw materials inventories, have had equally strong repercussions on the prices and volume of their trade with Latin America. The rise in incomes resulting from defence programmes and the ensuing high levels of economic activity have affected North American and European consumption behaviour, an element of very considerable importance to Latin America. Of outstanding significance has been the demand in industrial areas for imported foodstuffs, and the changing pyschology determining normal or forward-buying of durable goods manufactured from raw materials which Latin America either exports or requires for its economic development. As a result, the effects of rearmament on raw materials prices, on the availability of capital goods and on consumer expenditures in industrial countries have combined to cause a greater influence upon recent economic developments within Latin America.

Following the sharp rise in international prices after July 1950, Latin America moved abruptly from the period of consolidation and stabilization of its post-war economy, into a phase of marked instability and uncertainty. In addition, new economic conditions have resulted from the fact that Latin America has become more closely linked to United States foreign trade and capital movements, while its ties with Europe have become relatively weaker. Thus fluctuations taking place within the U. S. economy have been quickly reflected, not only in Latin-American prices and income, but also in the attitudes governing Latin-American decisions regarding new investments in industry, mining, agriculture and other development projects, where expectations of foreign-exchange availabilities and prospects for their future stability play an important role.

The apparent return to normal conditions by mid-1952, as concerns world availabilities of raw materials and other commodities that had been in short supply during the preceding two years, by no means dispelled the extremely unsettled outlook for Latin America. In general, although the rise in raw material prices, initiated by events in Korea, was interrupted by 1952, some prices remained higher than the first half of 1950, whereas others fell considerably and showed no signs of recovery. Moreover, while the level of economic activity in Europe and North America was high in the second half of 1952, compared with the pre-Korea period, there were nevertheless clear indications that the expansion of industrial output was becoming slower, and in some European countries was even falling.

Several factors accounted for this trend, among which the rate of military defence expenditure was outstanding. In the United States and Europe, this item was a principal contributor, in 1950, to the increase in world demand. By the end of 1952, however, its rate slackened (see plate 30). By mid-1952, it became clear that, as a result of the strong impetus given to North American industrial production in 1951, the United States defence programme was no longer a primary inflationary factor. Instead of an insistance upon rearmament reaching its peak in a relatively short time, the emphasis during 1951 was placed on the expansion of industrial capacity to a point where it would be compatible with the requirements of a general mobilization. Thus, instead of defence expenditure accounting for 15 to 18 per cent of total output, as initially expected, it absorbed only some 10 per cent at the beginning of 1951, 13 per cent in mid-1951, and a slightly higher figure by mid-1952. It was estimated that the monthly rate of defence spending prevailing until the second half of 1952, some 4,000 million dollars, would not exceed 5,000 to 5,500 million dollars by the end of 1953. Thus the effects of additional absorption of economic resources into the sector of civilian industry for defence would probably not prove to be very pronounced.[1] Because of the expansion already attained in the steel industry, and in the production of non-ferrous and other basic metals, by mid-1952 the North American economy had practically reached the point where defence requirements could be satisfied without seriously affecting the consumer sector or the volume of exports. Indeed, it has been estimated that aggregate United States industrial capacity is now some 50 per cent greater than at the end of the Second World War; by the end of 1952 the United States Government had announced new projects for basic industrial expansion, especially to increase output capacity for steel, alloys and various types of equipment. It was also announced that controls on the use of leading iron, steel and chemical products would be relaxed.

Western European defence expenditure absorbed 7.3 per cent of the aggregate national product in 1951-52. It is probable that this ratio will not exceed 8.5 per cent in 1952-53, although in some countries, such as France and the United Kingdom, it might reach 10 per cent.

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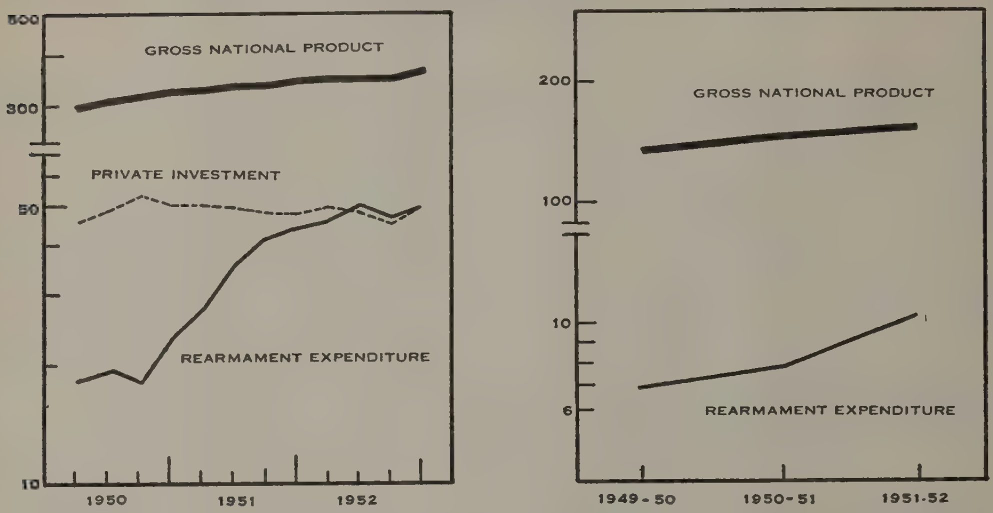
[1] Between 1950 and 1951, the monthly rate of defence expenditures rose 90 per cent, in real terms.

Plate 30

THE PRINCIPAL ECONOMIC FACTORS IN THE UNITED STATES AND WESTERN EUROPE WHICH AFFECT LATIN AMERICA, 1950-52

Thousands of million dollars

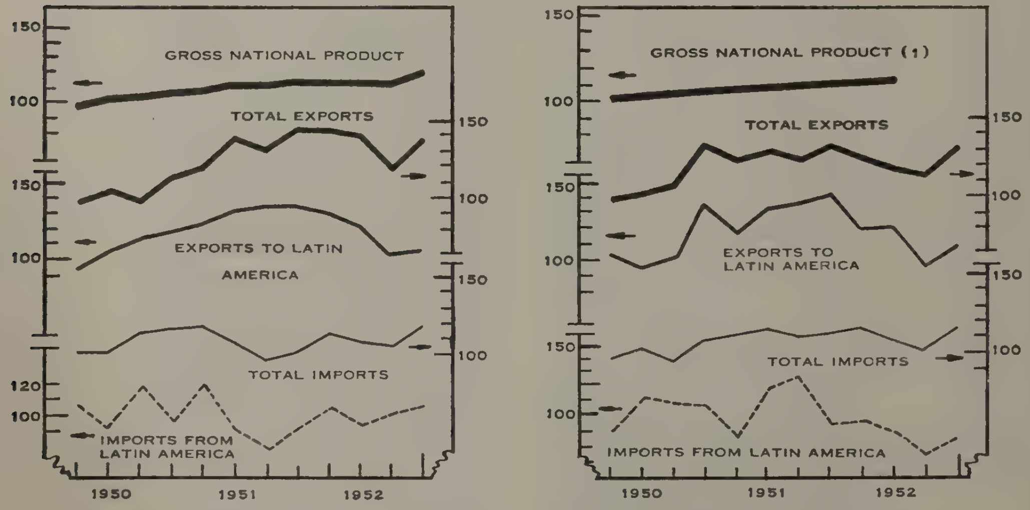


United States (1952 prices) (Semi-logarithmic scale) Western Europe (1951-52 prices)

Quantum indices

January–June 1950 = 100

(Natural scale)



(1) July 1950–June 1951 = 100

Note: "Western Europe" includes only the member states of OEEC. However, the gross national product and rearmament expenditures include only twelve countries in the North Atlantic Treaty Organization, plus Western Germany and Austria.

Sources: Based on data published by the Council of Economic Advisers of the United States, the Mutul Security Agency and OEEC.

By the end of 1952, the rate of growth for private investment, another determining factor of economic activity, was almost stationary in both the United States and Europe, even though its level continued to be high. In the United States, this tendency was clearly visible in new plant and equipment expenditure, as well as for agricultural investment and for residential building. It was, moreover, particularly evident in fluctuations of inventories, which, in contrast to their exceptional position in 1951, were not being accumulated in the first half of 1952, but recovered later. There was no certainty that European investments by the end of 1952 would maintain their level of the preceding years. In face of factors similar to the United States, European investments were complicated by high raw materials prices, shortages of some basic products and maladjustment between the productive capacity for capital goods and that for consumer goods industries, which had risen rapidly in many countries.

Instability also characterized consumption behaviour. Considerable forward-buying by North American consumers had taken place after the outbreak of hostilities in Korea, especially for durable goods; but demand for such commodities dropped sharply in 1951, so much so that purchases in 1952 were almost entirely limited to normal replacement. In the United States, this led to the elimination of controls on credit and consumer expenditure. In Western Europe, the principal consumer goods industries encountered very difficult conditions after mid-1952, because of dwindling demand. In the United States, the voluntary stabilization of consumption resulted in a substantial volume of private saving and liquidity, which may well be a possible source of instability if consumer expectations should change abruptly (see the second chart of plate 33).

To these general factors influencing the region, which may again cause fluctuations in international prices and stocks of the principal raw materials, must be added the possibility that future changes in the political situation of the world may alter the policy of defence expenditure. For Latin America, this could spell even further uncertainties, due to the difficulty of forecasting future trends in the individual economies of North America and Europe if rearmament expenditures were to decline.

The combination of special factors determining the bases of economic activity during the past three years thus emphasizes the fundamental problem of sustaining high levels both of income and output in the industrial countries. Taking this into account, it is also necessary

Table 67. Volume of United States exports to Latin America, by groups

Groups	*Jan.–June 1950*	*1951*			*1952*			
		Jan.–June	*July–Sept.*	*Oct.–Dec.*	*Jan.–March*	*April–June*	*July–Sept.*[a]	*Oct.–Dec.*[a]
	(millions of US$)	*(January–June 1950=100)* [b]						
Food, beverages and tobacco	133	121	155	153	163	149	179	157
Raw materials	83	123	132	150	142	118	..	..
Metals and manufactures	139	109	113	113	126	126	82	119
Machinery	253	134	156	156	158	140	104	107
For power	15	160	180	163	171	135	127	140
Agricultural	15	136	161	183	141	126	71	83
Machine tools	10	102	117	120	109	109	85	138
Textile	16	157	172	166	137	106	65	87
Business	10	190	188	150	144	122	106	72
Electrical	29	96	129	120	147	147	..	..
Total vehicles, including passenger motor vehicles	246	141	143	129	128	120	96	105
Total vehicles, excluding passenger motor vehicles	210	119	125	126	124	105	90	103
Automotive vehicles, excluding passenger motor vehicles	96	183	195	202	193	159	139	155
Passenger motor vehicles	37	258	243	143	147	202	122	114
Automotive vehicles, including passenger motor vehicles	132	206	210	187	182	172	136	145
Tractors	29	168	137	137	168	130	85	86
Locomotives	17	27	101	69	45	39	85	149
Other rolling stock	7	139	182	215	112	149	264	239
Vessels	59	16	9	1	14	19	–	3
Chemical products	122	120	139	121	117	110	94	90
Textiles	97	94	79	93	104	98	84	99
Other manufactures	*109*	*122*	*119*	*122*	*124*	*127*	..	..
Total, excluding "special categories"	1,182	124	135	133	135	126	111	117
Total, including "special categories"	1,226	124	134	135	135	127	110	115

Source: Data from the United States Department of Commerce, regrouped by the Economic Commission for Latin America, and deflated by official price indices in the United States.

[a] The figures for the second half of 1952 are not strictly comparable with those preceding them, since a different method has been used to deflate current values.

[b] Indices are based on dollar figures at prices for the first half of 1950.

to measure the long-term trend of Latin-American economic growth, whether the capacity to import capital goods and raw materials grows or not.

2. Supplies available to Latin America from industrial countries, 1951-52

In terms of its impact on Latin America, an outstanding event was the realization in mid-1951 that there would be no general shortages in supply availabilities. With the exception of a few primary products, capital goods and individual items of heavy industry, it was evident that large-scale forward-buying, to avoid the critical supply problems existing between 1941 and 1945, would not be necessary.

During 1951, the quantum of total Latin-American imports was the highest ever recorded.[2] Its decline in some countries during 1952 was more due to a contraction of foreign exchange holdings than to the inability of industrial countries to supply equipment for heavy industries in development programmes, or raw materials for the growing industrial activities of the region.

During 1951, the quantum of North American exports to the region rose by 22 per cent over the preceding year. This rate was maintained during the first half of 1952, but subsequently declined as foreign exchange problems became more critical in certain Latin-American countries.

The outbreak of hostilities in Korea led Latin America to believe that an adequate supply of imported capital goods would not be available and this would delay certain important industrial projects. The United States defence programme in fact affected availabilities of electrical material, heavy transport equipment and structural steel, for which domestic defence and defence supporting requirements received greater preference than exports unconnected with rearmament. Nevertheless, Latin America obtained increasing supplies of these goods throughout 1951 and the first half of 1952, despite higher prices. Indeed, increases were observed in practically every class of goods exported from the United States to Latin America until June 1952, except in some countries where special exchange or quantitative import controls were in force (see table 67).

The principal exceptions were items affected by special supply conditions. During 1952, for example, a serious shortage of sulphur in the United States resulted in an export decline. Although certain Latin-American countries, such as Mexico, increased their own output and exported a surplus, others were obliged to adapt themselves to inadequate sulphur availabilities. Similarly, the volume of foreign demand for United States copper and aluminium was substantially in excess of the amount that the United States could export. Nickel was in short supply, as a result of the heavy purchases made in Canada and other producing areas by the United States. However, Latin America's share of the total volume of United States controlled exports remained high and stable, as it did with goods on which no controls had been placed (see

Table 68. Latin America's share in total and controlled exports from the United States, 1951–52
(Percentages)

	1951				*1952*			
	1st quarter	*2nd quarter*	*3rd quarter*	*4th quarter*	*1st quarter*	*2nd quarter*	*3rd quarter*	*4th quarter*
Iron and steel products								
Total	36	38	36	34	28	36	23	28
Controlled	49	53	49	47	39	37	39	42
Electrical machinery								
Total	46	45	46	46	44	39	36	39
Controlled	23	25	21	25	25	23	22	26
Industrial machinery								
Total	35	35	38	38	35	32	31	29
Controlled	23	27	33	35	31	32	34	31
Tractors, replacements and accessories								
Total	35	30	31	32	31	25	28	27
Controlled	15	11	8	7	10	8	10	10
Industrial chemicals								
Total	43	44	44	40	38	38	38	36
Controlled	34	36	35	34	36	36	43	37
Fertilizers								
Total	39	42	31	28	33	36	13	..
Controlled	90	98	100	29	60	70	22	..
Non-ferrous metals and manufactures								
Total	17	19	21	15	11	11	10	7
Controlled	17	20	25	17	12	12	11	10
Crude sulphur								
Total	..	..	7	6	9	7	5	10
Controlled	..	..	*10*	*5*	*11*	*10*	*7*	*14*
Total exports [a] (excluding "special categories")								
Total	29	27	30	27	27	28	30	27
Controlled	21	22	26	28	27	30	31	32

Source: United States Department of Commerce, *Export Control Quarterly Reports.*

[a] The classification refers exclusively to U. S. goods. Re-exports are included only in the total.

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[2] In chapter III, part II, recent trends in the quantum of Latin-American imports are described in greater detail, showing the differences by country and by class of commodity.

Table 69. Volume of Western European exports to Latin America, by groups [a]

Groups	Jan.–June 1950	1951		
		Jan.–June	July–Sept.	Oct.–Dec.
	(millions of US$)	(Jan.–June, 1950=100) [b]		
Foodstuffs, beverages and tobacco	30.6	126	121	150
Raw materials	39.9	110	92	106
Metals and metal manufactures	146.5	123	125	119
Machinery				
For power	8.1	193	180	184
Agricultural	2.4	152	163	104
Machine tools	5.7	174	192	84
Textile	15.1	118	14	111
Business	2.2	211	235	264
Non-electrical for other purposes	36.3	134	133	14
Electrical generators	4.8	127	139	182
Miscellaneous electrical	14.2	148	180	137
Vehicles				
Automobiles	19.8	184	197	193
Tractors	4.0	235	321	177
Locomotives	1.4	187	61	173
Other rolling stock	5.8	100	76	121
Vessels	23.4	16	50	140
Other vehicles	26.9	93	109	94
Chemical products	54.2	108	124	107
Textiles	53.9	117	93	94
Other manufactures	47.1	131	141	139
Unspecified articles	*12.1*	*119*	*132*	*153*
TOTAL	554.4	128	135	137

Source: Economic Commission for Europe; data specially regrouped for the Economic Commission for Latin America.

[a] Countries included in the Organization for European Economic Co-operation, with the exception of Switzerland, Portugal, Turkey, Greece, Ireland, Iceland and Trieste.

[b] Half-yearly indices based on January–September 1950 prices, in dollars.

ble 68). A comparison between the increase in the nited States gross product and in total exports to Latin merica during 1951-52, shows that the latter expansion as greater than the former (see plate 30).

Despite the mid-1952 steel strike (the effects of which ere later felt by electrical and transport equipment manuacturers and the petroleum industry), accumulated stocks, apid output recovery and the expansion of steel capacity y the end of 1952, indicated favourable supply prospects or 1953 and continued improvement thereafter. At the ame time, Latin America's iron and steel production has een increasing and new projects are under way to replace ertain types of steel imports.[3]

During 1951, the quantum of Western European exorts to the region was some 20 per cent above the first alf of 1950. Particularly, the volume of electric motors nd machinery, machine tools, textile machinery, tractors, olling stock and other capital exports; was well over 30 er cent higher, although in some cases a decline appeared the last quarter of 1951 (see table 69). With the excepon of finished textile goods, industrial raw materials and ertain types of non-electric machinery for varied uses, ere was no important item which Europe was not able provide in larger volume for Latin America.

There were, however, important changes in the source f imports from Europe. Those from the United Kingdom ecorded a lower level than in 1950. In part, this was due decreases in output, but it also occurred because a larger share of British exports was directed to sterling area countries, many of which have been accelerating their programmes of economic development. These tendencies were also noted in the trade of other European countries such as France, Belgium and Italy, whose 1951 exports to Latin America rose at a slower rate than those shipped to the sterling area.

The notable exception was Western Germany, its trade with Latin America rising rapidly throughout 1951. In 1951, the aggregate German export volume rose 43 per cent above 1950, while exports to Latin America almost

Table 70. Volume of Western European exports;[a] total to Latin America and the sterling area, 1948–52

(Millions of dollars at prices for the first six months of 1950)

	Total exports	To Latin America	To the outer sterling area [b]	Percentage to Latin America
1948	12,852	951	1,864	7.4
1949	15,428	1,055	2,186	6.8
1950	19,736	1,349	2,349	6.8
1951	22,468	1,638	2,780	7.3
1952	21,543	1,367	2,282	6.3

Source: Foreign Trade Statistical Bulletin, December 1951 and August–September 1952 (Organization for European Economic Co-operation).

[a] Member countries of the Organization for European Economic Co-operation.

[b] Not included in the Organization for European Economic Co-operation.

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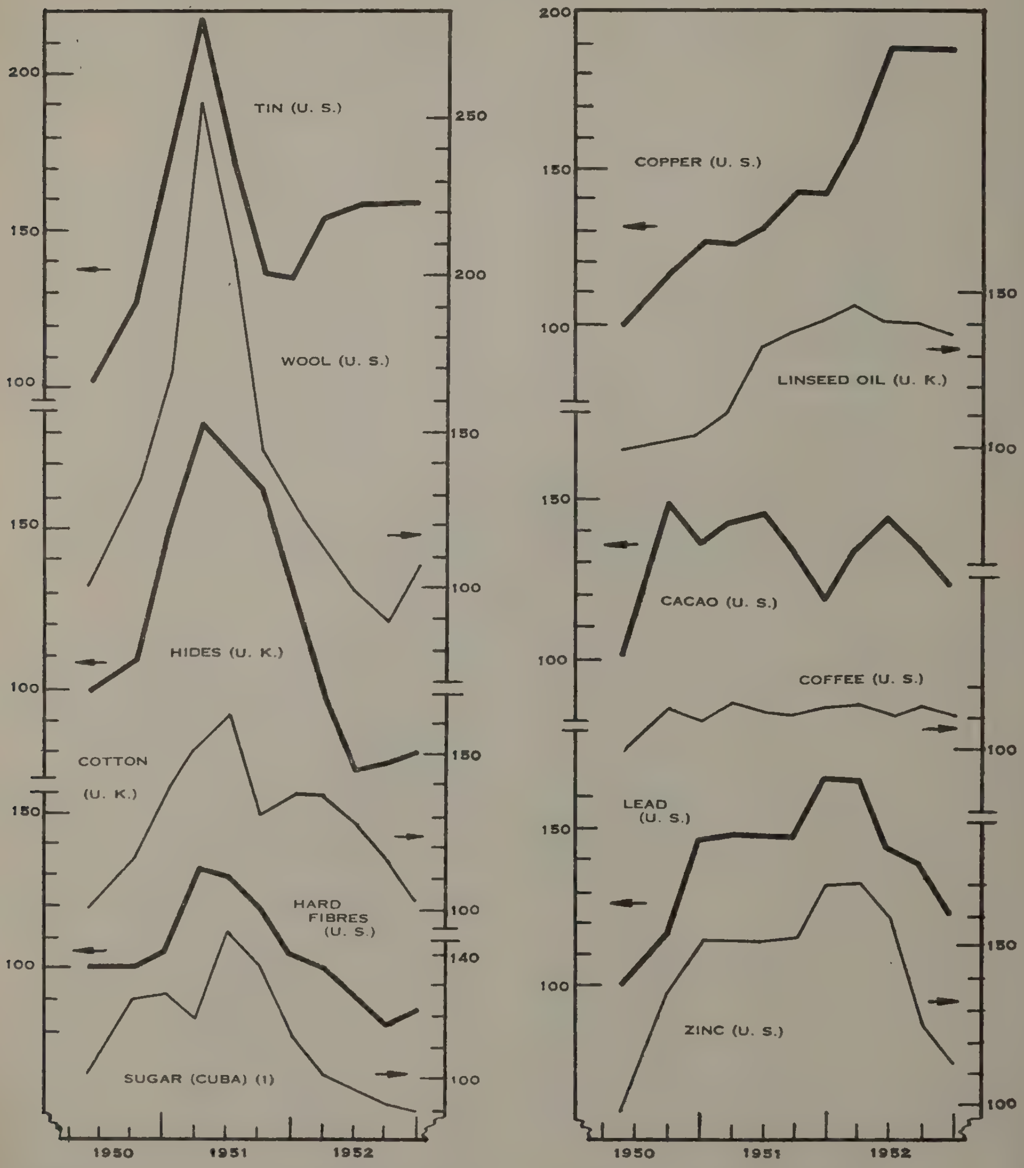
[3] In chapter II of part III, the stimulus given to Latin-Ameran output of iron and steel is described.

Plate 31

WHOLESALE PRICES IN THE UNITED STATES AND THE UNITED KINGDOM FOR LATIN-AMERICAN EXPORT PRODUCTS

Indices: average January-June 1950 = 100

(Natural scale)



(1) Adequate price series for the United States not available.

Sources: International Financial Statistics, International Monetary Fund; *Monthly Bulletin,* United Nations.

Table 71. Volume of exports from Western Europe [a] and Western Germany to Latin America, 1948–52 [b]

(Millions of dollars at prices prevailing during the first half of 1950)

Years	*European exports to Latin America (excluding Germany)*		*Western German exports to Latin America*	
	Millions of dollars at Jan.–June 1950 prices	*Indices Jan.–June 1950 = 100*	*Millions of dollars at Jan.–June 1950 prices*	*Indices Jan.–June 1950 = 100*
1948	948	84	3	4
1949	1,027	91	28	31
1950	1,195	106	154	173
1951	1,333	118	305	342
1952	1,052	93	315	353

Source: Organization for European Economic Co-operation, *Foreign Trade Statistical Bulletin,* Series 1.

[a] Member countries of the Organization for European Economic Co-operation.

[b] The figures for total European exports, excluding Western Germany, were deflated by the export price indices of OEEC countries trading outside Europe. German export figures, in turn, were deflated by that country's export price indices for trade with the rest of the world.

doubled. This was possible because Germany took advantage of its previously under-employed output capacity and also entered into credit arrangements with several Latin-American republics. The recovery of Germany's trade with Latin America was so remarkable that, in 1951, its exports accounted for more than the total increase of all other European exports to the region. (See tables 70 and 71.)

However, this tendency did not continue throughout 1952. European exports to Latin America decreased, due both to the lack of additional industrial capacity (especially for capital goods) and because of continued shortages of certain raw materials. Western Germany was an exception to this general rule, its exports rising slightly. Until the end of 1952 it was anticipated that rearmament would continue to have a substantial influence on European output of capital goods. However, there were some signs that the shortages of coal and steel would become less acute. European exports of capital goods could not be increased to any great extent unless the resources of consumers goods industries, which had previously expanded at an excessive pace and were undergoing a serious crisis, could be transferred to the production of machinery and equipment. Excluding Germany, Europe's post-war consumer industries have grown to a relatively greater extent than have capital goods industries. Thus most of Western Europe was not favourably situated to meet Latin America's post-war demand, which tends to seek capital goods rather than consumer products.

Japan has also been playing an increasingly important role in Latin-American trade. Imports from that country rose from 42 million dollars in 1950 to 89 million in 1951. In terms of constant prices, this represented an increase of some 50 per cent. However, during the first quarter of 1952, their value fell sharply to 16 million dollars. In contrast to Germany, Japanese exports to Latin America were limited to only a few countries, in particular Brazil and Argentina. Since 1950, Japan has suffered from rising prices for the raw materials it requires and from serious domestic inflation. Because of the resulting high prices, Japanese exports have encountered certain difficulties. Thus, while Japan's industrial output rose almost 40 per cent in 1951, the export volume increased only 13 per cent, the major part of this increase representing the growth of textile production.

3. WORLD DEMAND FOR PRIMARY PRODUCTS

The United States and European rearmament programmes have not prevented Latin America from importing capital and consumer goods with the exceptions already noted. Since 1950, the world demand for raw materials and foodstuffs (which is the basic factor for Latin America's capacity to import) has been subject to changing conditions, resulting in abrupt price fluctuations. The rise in prices, after mid-1950, was largely due to increased stockpiling demand and to artificial shortages caused by speculation and forward-purchases during that period. During the same period, the demand for commodities essential to industrial expansion, especially non-ferrous metals, also increased.

Under these circumstances, many diverse tendencies became apparent. By the end of 1951, the inventory peak had been reached and prices had turned down. By mid-1952, conversely, this in turn was checked by the stable demand that followed high levels of economic activity in industrial countries. Prices for a number of important Latin-American exports of primary goods were maintained throughout 1952, higher, in fact, than were their levels before the Korean war. (See plate 31.)

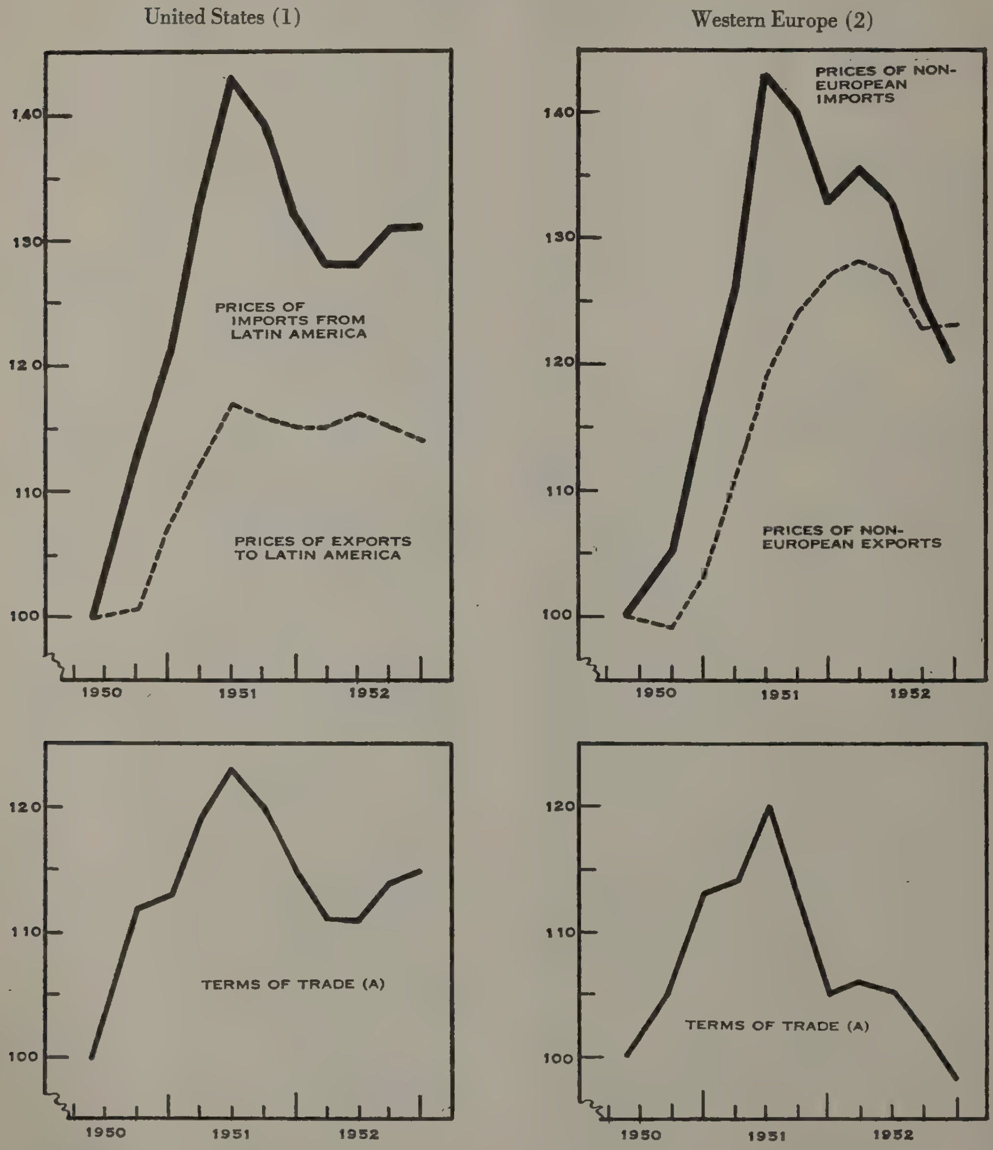
This was the case for basic metals, world prices for which fell only slightly during 1951 and 1952, although in the second half of 1952 zinc and lead prices suffered a sharp fall. In 1951, European stocks were lower than in the United States, and thus Latin America was able to sell substantial quantities of lead, zinc and copper to Europe at prices well above official world levels. The exceptional prices paid by the European countries began to decline early in 1952, but coincided with a renewal of United States stockpile purchases. In the case of copper, prices by mid-1952 were some 80 per cent higher than during the first half of 1950, due mainly to the heavy United States demand. In May 1952, it was necessary to raise the U. S. price of imported copper above the ceiling. This was to attract sufficient shipments and thereby offset the intense drain on stocks and the difficulties that would arise over a short period if an extensive replacement of copper by aluminium was attempted. During 1952, tin remained directly subject to the control which the United States Government exercised over its purchase and sale, the price being fixed at 1.21 U.S. cents per pound. Quotations had stood at 0.76 cents during the first half of 1950.

Foodstuffs, which represent 48.7 per cent of Latin-American exports, continued in firm demand by the United States during 1952, so that price fluctuations resulted almost exclusively from harvest conditions in producer areas. Coffee prices, after rising spectacularly from the pre-Korean war period, because of radical changes in factors affecting supply and demand, remained during 1952 at a level 11 per cent to 15 per cent higher than the first half of 1950. The volume exported from Latin America, however, showed little increase, due to the slow reaction of production. Sugar prices, conversely, dropped sharply in mid-1952 when the Cuban harvest reached an unprecedented level, although the decline was halted by the purchases made by certain European countries. Further favourable factors were the granting of bank credits to finance stocks and the United States import

Plate 32

PRICE MOVEMENTS IN UNITED STATES AND WESTERN EUROPEAN TRADE WITH THE REST OF THE WORLD

Indices January-June 1950 = 100
Quarterly average
(Natural scale)


United States (1)

Western Europe (2)

(A) From the Latin-American standpoint.

Note: "Western Europe" includes only member states of OEEC.

Sources: (1) Based on data from the United States Department of Commerce; (2) based on data published by OEEC.

quota was set at a level higher than had been foreseen. Cacao prices fluctuated considerably. Shore crops gave rise to high prices in 1951 and they fell again due to the strong resistance of demand. Low production levels caused another rise during mid-1952, while during the second half of the year they declined slightly once more. Prices of edible oils and fats decreased because of greater output between 1950 and 1951; meanwhile, the shortages existing since the end of the Second World War were being gradually eliminated.

The group of products most influenced by changes in demand were textile fibres and hides, the prices of which fell so considerably that they seriously affected exports of several Latin-American countries. Rearmament expenditures had little influence on their position which, in fact, reacted to the relationship between purchases by the final consumer and stock levels. During 1952, the prices of wool, hard fibres and hides, while making small recoveries, remained below pre-Korean war levels. This was due both to stocks accumulated during 1950-51 and to the competitive impact of substitutes such as rayon and plastics. Cotton prices did not fall as much as those of other fibres, but they weakened appreciably in 1952, especially in relation to the abnormally high levels attained in world markets during 1951. This decline, associated with the crisis in the world textile industry and with the improvement in North American crops arising from the 1952 harvest, greatly influenced the region's foreign exchange earnings from Europe and Japan, whose reduction in demand extended mainly to Latin-American exports. At the present level of Latin-American export prices (which during the last months of 1952 were 40 to 50 per cent higher than pre-Korea), cotton sales have been small and stocks have begun to accumulate, which the governments of certain Latin-American countries have been obliged to finance.

In 1952, industrial countries were again able to obtain adequate stocks of those industrial oils and fats exported by Latin America. This led to a substantial fall in their prices during the first half of the year, although they remained generally higher than in 1950.

To summarize, despite high levels of economic activity in industrial countries, Latin-American primary products in world markets were characterized by substantial price fluctuations and by the importance of short-term changes in the countries to which they were exported. Two outstanding factors were of significance to Latin America: firstly, variations in the volume of United States imports of industrial raw materials, resulting principally from inventory policies; secondly, because of limited stocks in relation to armament expenditures, Western Europe suddenly required imports of industrial primary products, even at prices above those existing in official markets. Both these factors contributed substantially to instability in Latin America. On the one hand, as soon as the initial volume of stocks had been built up, the emergency demand in Europe contracted, and Latin America, which had been principally a marginal supplier, rapidly lost the position it had gained. On the other hand, the renewal of United States imports in 1952 for stockpiling, counteracted the down trend in prices, and stressed the fundamental dependence of Latin America upon the North American market. Another feature might be mentioned in connexion with this dependence. Any new change in the policy affecting inventories will strongly affect Latin America's position and its foreign-exchange receipts, which have been so important in financing capital goods imports during the past two years. North American imports of the region's foodstuffs, which provide the major part of Latin America's foreign-exchange earnings, do not suffer to the same degree from those factors, thus fluctuations in their prices have been fewer and less intense. Nevertheless, Latin America's position depends directly upon the general levels of economic activity and income within the United States.

4. TERMS OF TRADE OF PRIMARY PRODUCTS AND MANUFACTURES

The terms of trade of raw materials and foodstuffs, in relation to industrial products, improved for Latin America in 1950 and the greater part of 1951. In practically every republic this resulted in an increase in their reserves, and in their capacity to import. By the end of 1951 and through most of 1952, however, these terms of trade tended to deteriorate.[4] The decline in raw materials prices was greater, in almost every case, than was generally to be observed in export prices of industrial countries, particularly the United States.

Nevertheless, because of changes in the terms of trade, the United States position differed from that of Europe (see plate 32). The fall in United States prices affected some of Latin America's principal exports of industrial raw materials. But the ratio between export and import prices, according to United States data, showed that in 1952, compared with pre-Korea, the United States terms of trade with the rest of the world had an advantage of some 10 per cent. About the middle of 1952, North American export prices were 17 per cent higher than before the Korean war, having declined slowly from the peak reached during the second quarter of 1951. Most of the price increases in United States manufactured exports took place prior to the first half of 1951, with no appreciable variations occurring throughout 1952. The rise in prices of United States food exports was most significant for Latin America in 1951, since the increase was considerably more marked than that recorded in United States wholesale prices for comparable products. Around the second half of 1952, drought conditions tended to raise prices once more. In addition, export prices of some finished goods rose, among them steel and other products of basic North American industries.

The advantages which the region had previously secured in its relations with Europe disappeared in the fourth quarter of 1952, when the terms of trade declined below the mid-1950 level. This was due both to the fact that Europe had been compelled to pay higher prices for imported raw materials, and because of a recurrence of inflationary tendencies. European export prices by the middle of 1952 were more than 25 per cent higher than before the Korean hostilities. The fall in the value of some raw materials during 1952 helped to reduce the rise in European output costs. Towards the end of the year, however, despite the rising trend of wages, some wholesale prices showed a slight decline that was partly due to a decrease in demand for finished goods. Nonetheless, export prices (particularly of capital goods), which rose above the general European wholesale price level in 1952, proved to be increasingly disadvantageous to Latin America because of its relatively large imports of European capital goods.

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[4] The terms of trade for Latin-American countries will be studied in greater detail in chapter III of part II.

Chapter II

THE BALANCE OF PAYMENTS AND ITS DETERMINING ELEMENTS

1. MOVEMENT AND COMPOSITION OF MONETARY RESERVES

Economic events in other countries and the considerable fluctuations of the prices of primary products, strongly influenced Latin-American monetary reserves during 1950-52. Moreover, the distribution of gold reserves and of free foreign exchange was modified in favour of countries trading principally in dollars, to the disadvantage of those whose trade with Europe was based on bilateral agreements. Short-term commercial liabilities with the United States increased, particularly in countries belonging to the latter group.

By the end of 1952, total gold and dollar reserves (the latter accounting for the majority of the total) had fallen, from the 3,700 millions reached in the first quarter of 1951 to 3,356 million dollars. The larger figure was slightly above the peak level previously reached at the end of 1946 (see plate 33).

During 1951 and the first half of 1952 a rapid contraction took place, mainly representing a loss of dollar-credit balances. In the second half of 1952 a slight recovery was registered.

This decline in gold and dollar reserves during 1951 and 1952 did not take place in all Latin-American countries. On the contrary, it was observed mainly in those where the export trade with Europe was governed by bilateral agreements which did not produce the free exchange necessary to pay for substantial deficits in trade balances with the United States. Thus, in Argentina, Brazil, Chile, Paraguay, Peru and Uruguay, reserves fell substantially, so much so that, between the beginning of 1951 and the third quarter of 1952, there was a loss of about 30 per cent. The above countries showed a notable improvement during the last quarter of 1952, especially Argentina and Chile. On the other hand, all the other countries (the majority of which traded in free exchange) were able to increase their gold and dollar reserves almost continuously after the end of 1950, to a level some 6 per cent higher by June 1952 and a further improvement of 2 per cent by September 1952. At the end of the year there was a slight decline.

The position of the former group was even more serious than the figures indicate, since short-term commercial obligations to the United States and other countries had, meanwhile, increased substantially. Brazil's gold and dollar reserves fell by 125 millions in 1951 and a further 27 millions during 1952, after which a slight improvement was recorded. However, the value of drafts issued by Brazilian merchants to North American exporters rose progressively, and by August 1952 transactions recorded by United States banks alone had reached the unprecedented total of 400 million dollars, or 300 million higher than June 1951.[1] Brazil's case appeared even more serious, since its deficit with Western Europe was, in addition, diminishing reserves of inconvertible currencies.

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[1] The periodical *Conjuntura Económica*, November 1952, page 2, estimated that delayed payments were 500 million dollars in October 1952, although a small reduction was since made in this total. In February 1953, Brazil obtained a 300 million dollar loan from the Export-Import Bank to consolidate the major portion of its trade deficit.

Table 72. Latin America: Gold and dollar reserves [a]

(Millions of dollars)

	1951				*1952*			
	March	*June*	*Sept.*	*Dec.*	*March*	*June*	*Sept.*	*Dec.*
Argentina.....	633	632	588	518	458	415	398	427
Bolivia.......	45	48	49	51	44	47	46	44
Brazil........	577	529	457	417	416	398	406	390
Chile.........	115	115	101	99	102	96	100	121
Colombia.....	107	125	114	154	157	138	153	184 [b]
Cuba.........	547	609	623	575	609	634	601	515
Mexico.......	413	352	335	366	357	266	320	375 [b]
Peru.........	101	100	99	93	102	103	102	102
Uruguay.....	377	355	332	306	294	309	303	300
Venezuela....	463	449	449	445	440	503	527	519
Others.......	351	341	339	336	386	392	382	374
Total for Latin America....	3,729	3,655	3,486	3,360	3,365	3,300	3,335 [b]	3,351 [b]

Source: Board of Governors of the Federal Reserve System, Washington, D.C.

[a] End of fiscal year. [b] Partial estimates.

Plate 33

LATIN AMERICA: GOLD AND DOLLAR EXCHANGE HOLDINGS

(Natural scale)

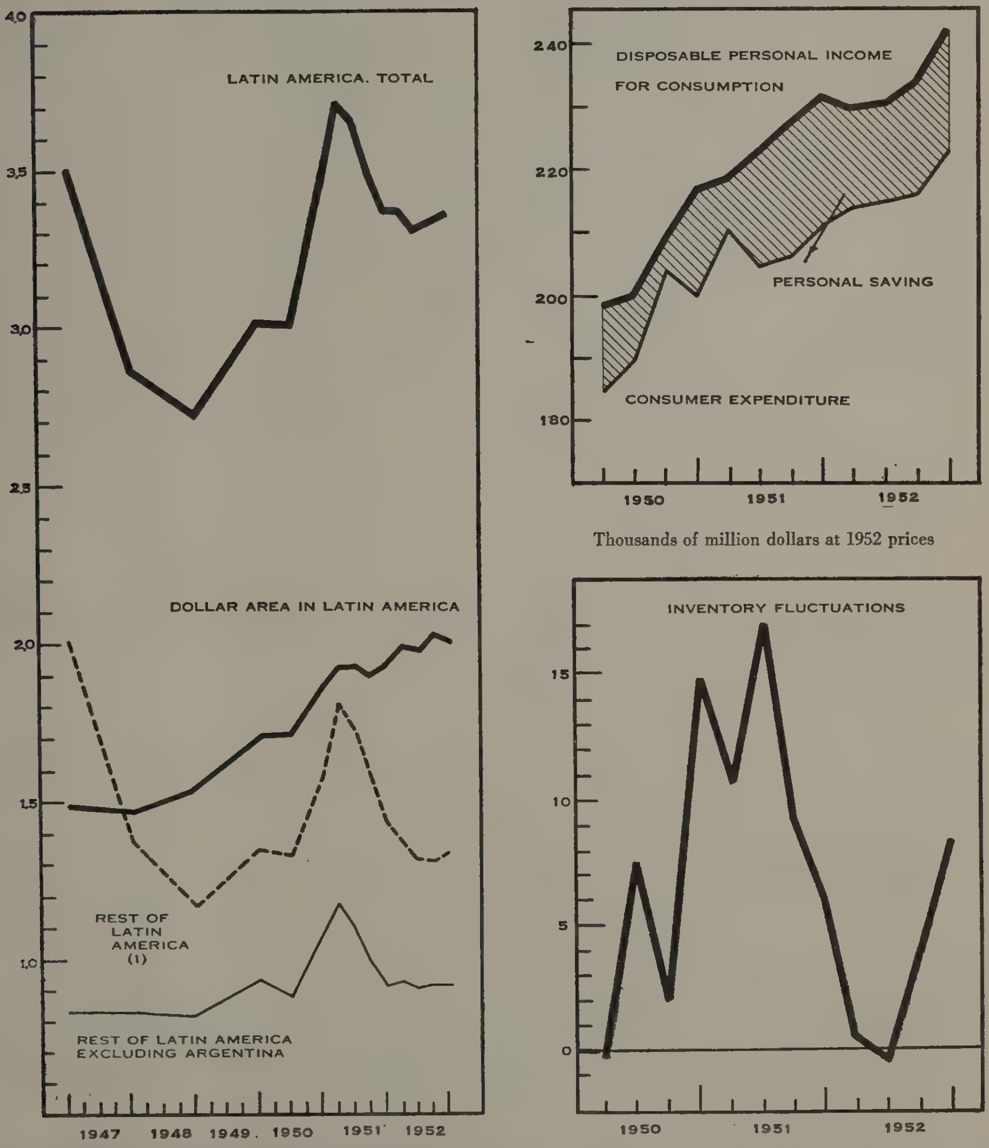
Gold and dollars

Millions of dollars

Disposable personal income, consumer expenditure and fluctuations of inventories in the United States

Current values

Thousands of million dollars at 1952 prices



(1) Argentina, Uruguay, Brazil, Paraguay, Chile, Peru.

Note: 1946-49 figures refer to end of year; 1950 data are half-yearly, and 1951-52 quarterly.

Sources: Board of Governors of the United States Federal Reserve Board. Based on data published by the United States Council of Economic Advisers.

The drop in Argentina's gold and free-exchange reserves started during the second half of 1951 and continued until the fourth quarter of 1952, when a significant recovery began. The loss until September 1952, estimated at not less than 200 million dollars since mid-1951, coincided with a substantial increase in official short-term foreign exchange obligations, equivalent to over 800 million Argentine pesos.

Although they had not decreased in 1951, Chile's gold and dollar reserves both subsequently recovered since mid-1952. Among the countries in the free-exchange area, only Mexico's monetary reserves shrank to any extent during 1951 and the first half of 1952. By the end of the year, however, the greater part of these losses had been made up.

2. THE DIRECTION AND VOLUME OF LATIN AMERICA'S INTERNATIONAL PAYMENTS

The above changes in the over-all situation and in the two groups of countries indicated, stem from the modification in Latin America's economic relations with the United States and Europe.

A radical change took place in Latin America's balance of payments with the United States. The decline in net exchange assets was due to sharp fluctuations in both imports and exports, as compared with 1950. From 1950 to 1951, Latin-American imports from the United States rose by over 1,000 million dollars, while its exports to that country exceeded the previous year by 450 millions, converting the 1950 surplus of 373 million dollars into a 1951

Table 73. Total balance of payments of Latin-American trade with the United States and the rest of the world, 1950–51

(Millions of dollars)

	1950			*1951*		
	United States [a]	*Europe and others* [b]	*Total*	*United States* [a]	*Europe and others* [b]	*Total*
A. Current account						
Exports, f.o.b.[c]	3,090	3,070	6,160	3,533	3,678	7,161
Imports, f.o.b.	−2,658	−1,837	−4,495	−3,733	−2,623	−6,356
Trade balance	432	1,233	1,615	−200	1,005	805
Travel	68	32	100	103	11	114
Net investment income	−748	−7	−755	−906	−39	−867
Transport and insurance	−52	−288	−340	−137	−470	−607
Other services	−72	−63	−135	−55	−103	−158
Private sources	23	−56	−33	41	−68	−27
Total of A	−349	851	502	−1,154	386	−768
B. Capital account						
Private long-term capital[d]	186	−100	86	322	100	422
Private short-term capital	29	23	52	−27	99	72
Special official financing:						
Loans and donations	106	−5	101	242	7	249
Amortization	−100	−65	−165	−87	−37	−124
Total of B	221	−147	74	450	169	619
C. Total of A + B	−128	704	576	−704	555	−149
D. Compensatory official financing						
Foreign-exchange reserves and International Monetary Fund [f]	−170	40	−130	187	38	225
Monetary gold [f]	−162	−54	−216	−124	43	−81
Others[g]	−5	−61	−66	108	−28	80
Total of D	−337	−75	−412	171	53	224
E. Errors, omissions and multilateral settlements [e]	−465	−629	−164	533	−608	−75

Source: International Monetary Fund. The 1951 figures were estimated on the basis of IMF data, by countries, and the balance of payment figures for the United States contained in *Survey of Current Business* (United States Department of Commerce).

[a] Includes IMF and IBRD operations.

[b] Excludes inter-Latin-American transactions.

[c] Includes non-monetary gold.

[d] Includes undistributed profits of subsidiary enterprises which represent direct investments. The flow of long-term capital to Europe and other areas probably includes income obtained from European petroleum investments and may also be the result of under-estimates of new European investments or over-estimates of United States capital receipts.

[e] Includes unidentified capital movements.

[f] The minus sign (−) indicates an increase.

[g] Includes United States Stabilization Fund operations and other official short-term transactions.

eficit of 269 millions. Payments to the United States for ervicing private investments in Latin America rose, over he same period, from 670 million dollars to 735 millions. hus the total current account deficit of the balance of ayments exceeded 1,000 million dollars, or three times he preceding year's deficit of 350 million dollars. (See ables 73 and 74.)

During the first half of 1952, the current account deficit vith the United States maintained a level similar to 1951. atin-American imports from the United States, at an nnual rate, were slightly greater than the 1951 total of ,800 million dollars. The annual level of exports was approximately the same as in 1950, namely, 3,500 millions. No significant changes were observed in the servicing of oreign capital. Not until the third quarter of 1952 did ny change in the situation become apparent. Imports rom the United States declined, exports rose slightly and lthough net payments for servicing private capital also ncreased, the current account deficit for that quarter vas only 230 million dollars at an annual rate. As the inal result of 1952, Latin America was able to show a mall surplus in its trade with the United States and the urrent account deficit was reduced to almost half that of 951. But this was due to the severe import restrictions dopted by leading Latin-American countries, a policy vhich cannot be carried too far without prejudicing the upply of essential equipment and capital goods.

The position regarding Europe has also changed considerably. During 1951, there were large transfers of old and dollars from Western Europe to various Latin-American countries. This situation arose, as in 1950, because the surplus of exports to Europe over imports was in part settled by convertible currencies. However, the demand for Latin-American products fell sharply during 1952, so that for the first time in the post-war period, Latin America's trade balance with Europe ceased to show a surplus, during the second and third quarters of the year. In addition, there was a deficit on transport services with Europe, which had expanded substantially since 1951. As a result, the current account deficit with Europe in 1952 prevented Latin America from settling its deficit with the United States as in previous years, namely, by transfers to the latter out of trade surpluses with Europe. This partly explains the acute exchange difficulties of several South American countries in 1952, especially Brazil, which was finally compelled to postpone payment of current dollar obligations.

During 1951, Japan's position in Latin America's balance of payments resembled that of Europe. In 1952, Japan was also unable to help Latin America cover its deficit with the United States. A surplus of some 200 million dollars, accruing to Latin America from trade with Japan in 1951, dwindled to a very small amount during the first half of 1952. The 1951 balance was particularly useful to countries having free exchange, such as Mexico and Cuba, but did not prove so advantageous to others whose currencies were weak.

Because of changes in the balance of payments with Europe, Japan and other areas paying dollars to Latin America in 1951 and earlier years, the region was com-

Table 74. Balance of payments: United States with Latin America

				1951				1952			
	1950	1951	1952	Jan.–Mar.	April–June	July–Sept.	Oct.–Dec.	Jan.–Mar.	Apr.–June	July–Sept.	Oct.–Dec.
Current account											
Exports, f.o.b.	2,717	3,802	3,520	857	949	1,001	995	1,016	929	770	805
Imports, f.o.b.	−3,090	−3,533	−3,591	−1,076	−913	−732	−812	−911	−857	−887	−936
Trade balance	−373	269	−71	−219	36	269	183	105	72	−117	−131
Travel	−68	−103	−91	−36	−18	−28	−21	−35	−17	−26	−13
Net investment income	682	747	656	147	169	171	261	159	158	160	179
Transport	37	59	43	1	16	30	12	12	17	8	6
Other services	79	61	76	17	14	14	16	21	17	17	21
Total of A	357	1,033	613	−90	217	456	450	262	247	42	62
Capital account											
Private long-term capital	−133	−149	−202	−115	−22	26	−38	−60	−102	−1	−39
Government capital	−35	−85	−57	−48	−36	–	−1	−9	−4	−39	−5
Unilateral transfers [a]	−61	−126	−130	−14	−14	−45	−53	−50	−36	−22	−22
Total of B	−216	−360	−389	−177	−72	−19	−92	−119	−142	−62	−66
Total of A + B	141	673	224	−267	145	437	358	143	105	−20	−4
Movement of short-term capital											
Latin-American dollar balances	153	−99	188	67	62	−128	−100	11	49	88	40
Monetary gold	162	124	−63	235	−76	−8	−27	−5	−95	1	36
U.S. credits	38	−140	−174	−35	17	−53	−69	−78	−117	34	−12
Total of D	353	−115	−49	267	3	−189	−196	−72	−163	123	64
Dollar credits from third areas and errors and omissions	−481	−558	−175	–	−148	−248	−162	−69	55	−101	−60

Source: Balance of Payments of the United States, 1949–51, and United States Department of Commerce, *Survey of Current Business.*

[a] Includes private and official transfers.

pelled to utilize its monetary reserves intensively (in order to cover the current account deficit with the United States). Certain transfers were nevertheless made in the capital account, consisting of private direct investments, long-term loans and short-term credit, the 1951 total of which exceeded that of 1950.

3. THE BALANCE OF PAYMENTS SITUATION IN SELECTED LATIN-AMERICAN COUNTRIES

The balance of payments of each Latin-American country has unique features, due to their differing stages of development, the nature of their primary output, the varying, and, at times, very powerful domestic monetary

Table 75. Latin America: Balance of payments of the Latin-American countries, 1950–51
(Millions of dollars)

Countries	Years	Current account			Capital movement [c]	Errors and omissions	Surplus or deficit [d]
		Trade balance [a]	Net services [b]	Balance			
Argentina....................	1950	122	−9	114	47 [e]	−74	86
	1951	−264	−17	−281	147 [e]	26	−108
Bolivia......................	1950	19	−23	−4	2	10	7
	1951	42	−27	15	6	−9	12
Brazil.......................	1950	425	−307	118	−60	−15	43
	1951	68	−445	−377	−31	64	−344
Chile........................	1950	50	−62	−12	−4	8	−8
	1951	29	−66	−38	35	3	–
Colombia.....................	1950	45	−65	−20	5	−11	−25
	1951	55	−71	−16	20	23	28
Costa Rica...................	1950	14	−13	1	4	5	9
	1951	12	−19	−7	7	13	12
Cuba.........................	1950	152	−94	58	22	−35	46
	1951	162	−104	58	60	−39	79
Dominican Republic...........	1950	44	−24	20	−3	−13	5
	1951	44	−35	9	6	−3	12
Ecuador......................	1950	35	−16	19	4	−2	21
	1951	18	−21	−3	−2	−3	−8
El Salvador..................	1950	19	−5	14	−11	–	2
	1951	15	−8	7	−5	–	1
Guatemala....................	1950	15	−10	4	5	−7	3
	1951	9	−8	1	4	−3	3
Haiti [f]......................	1950	3	−4	−1	4	–	3
	1951	6	−6	–	5	−2	3
Honduras.....................	1950	30	−30	–	8	−5	3
	1951	26	−33	−7	13	3	9
Mexico.......................	1950	−66	106	40	117 [g]	50	208
	1951	−268	165	103	54 [g] [h]	76	27
Nicaragua....................	1950	11	−10	1	−1	−1	−1
	1951	17	−10	7	1	−1	7
Panama.......................	1950	4	−24	−20	11	4	−5
	1951	..	..	..	..	..	..
Paraguay.....................	1950	16	−7	9	−1	1	9
	1951	13	−9	4	1	–	5
Peru.........................	1950	55	−61	−6	13	−2	5
	1951	45	−81	−36	38	2	4
Uruguay......................	1950	49	−1	48	18	−2	64
	1951	−76	−3	−79	7	9	−64
Venezuela....................	1950	579	−536	43	−34	−89	−80
	1951	639	−584	54	−6	−43	5

Sources: Data based on statistics of the International Monetary Fund in the *Balance of Payments Yearbook 1950–51* and *International Financial Statistics*, except 1951 statistics for Argentina and El Salvador, which are estimated from official sources.

Note: Totals may differ from the sum of individual items due to rounding out figures.

[a] Includes non-monetary gold where this is an important item in a country's foreign trade. Import values are f.o.b., with the exception of Argentina, Chile, Colombia, Mexico and Uruguay, for which c.i.f. values are quoted.

[b] Includes insurance, freight, travellers' expenses, profits and interest on foreign investments and loans, reinvestments, government transactions not included elsewhere, private and institutional donations and other items.

[c] Includes private short- and long-term capital movements, plus reinvestments and long-term government loans, minus amortization payments.

[d] Deficits or surpluses covered by transfers from reserves, short-term government credits, and balances arising from payment agreements, etc.

[e] Includes inflow of capital in the form of imported merchandise "without use of foreign exchange".

[f] Refers to fiscal year 1 October to 30 September.

[g] This includes an income of 56 million U. S. dollars of short-term capital in 1950 and 46 million U. S. dollars in 1951, representing a decrease in foreign bank balances of Mexican individuals and enterprises, and a decrease in their obligation to foreign banks.

[h] No information is available as yet regarding reinvestments of profits accruing to foreign capital, although their total in 1951 was probably substantial.

ictors and other influences. In nearly every country, nports expanded appreciably throughout 1951 and 1952, s a result of the improvement in terms of trade in 1950. his upward trend was due both to higher disposable in-ome and the consequent increase in demand for im-orted products, and because of government policy to ipply domestic industries with raw materials which, it as presumed, would be in short supply and therefore igher priced. Concurrently, similar facilities were granted r imports of capital goods required to maintain public nd private investments at high levels.

The increasing trend of exports, beginning in the second alf of 1950, showed signs of becoming unstable and less vourable by 1952. Some countries, such as those export-ig food, petroleum and metals, were able to maintain xports at a high level despite the fall in prices. Others, r example those exporting wool, cotton and hides, were eriously affected by the downward trend in world mar-ets, or by inadequate production, as in the case of Argen-ne wheat, the earlier exportable surplus of which had isappeared by 1952. With the exception of Mexico, hich earns substantial tourist income, the remaining atin-American countries registered sizable deficits with espect to services in their balance of payments. These ervices include freight, insurance, net investment income nd other invisible items. In 1951, the deficit arising om services was higher in almost every country and thus e current account position of each deteriorated to a reater or lesser extent in the balance of trade.

During the past two years, factors such as these ac-ounted for the specific problems which developed in some countries, and became aggravated in others, thus producing widely differing results.[2] The decline in export income, particularly in the dollar area, generally required South America to restrict imports severely after the first quarter of 1952. Such methods included direct prohibition, or alternatively reinforcement of exchange controls, or a lowering of the exchange rate. Domestic monetary policy in some instances favoured a reduction of imports, especially in Argentina where a deflationary process was initiated. In others, continued inflation made it more difficult to control imports, as, for instance, in the case of Chile.

able 76. Indices of the total c.i.f. dollar import values of Latin-American countries

	1950 (millions of dollars)	*1951*	*1952*
		(1950=100)	
ountries whose import rose more than 40 per cent in 1951:			
Brazil	1,098	183	183
Uruguay	200	158	119
Argentina	930	151	92
Peru	175	150	165
Mexico	556	148	133
TOTAL LATIN AMERICA	*5,251*	*145*	*135*
Paraguay	21	143	200
Bolivia	64	142	116
ountries whose imports rose between 20 per cent and 40 per cent in 1951:			
El Salvador	50	134	136
Honduras	38	134	168
Chile	248	133	150
Ecuador	48	133	135
Dominican Republic	48	133	181
Cuba	556	124	120
Costa Rica	46	122	148
Nicaragua	28	121	157
Venezuela	601	120	135
ountries whose imports rose less than 20 per cent in 1951:			
Haiti	38	116	139
Colombia	364	114	110
Panama	71	107	124
Guatemala	71	114	107

Source: International Monetary Fund, *International Financial atistics.*

Table 77. Indices of the total f.o.b. dollar export values of Latin-American countries [a]

	1950 (millions of dollars)	*1951*	*1952*
		(1950=100)	
Countries whose exports rose more than 30 per cent in 1951:			
Bolivia	94	161	152
Dominican Republic	87	137	132
Nicaragua	27	137	156
Chile	282	132	162
Peru	190	131	123
Haiti	39	131	133
Brazil	1,347	130	105
Countries whose exports rose between 15 per cent and 30 per cent in 1951:			
Mexico	466	125	125
El Salvador	68	124	128
TOTAL LATIN AMERICA	*6,549*	*120*	*108*
Cuba	657	120	105
Venezuela	1,248	117	124
Colombia	396	116	116
Paraguay	33	115	94
Countries whose exports rose less than 15 per cent or declined in 1951:			
Honduras	58	114	105
Costa Rica	56	113	129
Guatemala	68	112	128
Argentina	1,100	110	61
Uruguay	254	93	82
Ecuador	66	86	118

Source: International Monetary Fund, *International Financial Statistics.*

[a] Panama excluded owing to lack of data.

(a) *Argentina*

Apart from the increase in imports, which was common to the whole of Latin America, the intense disequilibrium in Argentina's current account resulted from its export values remaining practically stationary in 1950 and 1951, and even diminishing in 1952. The reasons for this lie partly in the suspension of cereal and meat exports, and partly in the sharp increase of both demand and prices on international wool and hide markets. The value of United States wool imports during the first half of 1952 was lower than in the preceding six-month period, which in turn was substantially lower in volume and value than in the first half of 1951. Argentina's rising trade deficit with the United States could not be balanced by commercial operations with Europe, as in previous years. In 1951, the surplus on current account with Europe declined because of the low volume of food exports, particularly to the United Kingdom. Foreign investments in Argentina, during 1951 and 1952, were too small to compensate deficits in Argentina's current account.

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[2] For additional data concerning the balance of payments in the different countries in 1950 and 1951 and the trend of their import and export values in 1951 and 1952, see tables 75, 76 and 77. The information that follows, referring to individual countries, should also be interpreted in relation to these tables.

(b) *Bolivia*

Bolivia's trade balance in 1950 had been affected by an interruption in tin shipments and there was thus a small deficit in its current account; by contrast, during 1951, despite a considerable rise in imports, the trade balance appears to have been able to cover the service deficit, judging from the partial data available. This situation has continued.

(c) *Brazil*

Brazil was the country with the most serious current account deficit during 1951 and the first half of 1952. This was largely due to the increased value of imports, which rose by 80 per cent in 1951 and showed an even higher rate for the initial six months of 1952. Moreover, exports rose only 34 per cent in 1951. A further cause was an abnormal deficit in the services account, including foreign investment income, freight and other items, which, in 1951, totalled 445 million dollars. In addition to the 1951 imports acting as an insurance against possible shortages of raw materials and capital goods, Brazil was also obliged to import wheat from the dollar area when the Argentine harvest failed. To these factors must be added the growing dependence upon imported fuels and the deferred demand for durable consumer goods, which could be met with a degree of freedom in 1951. The final effect on imports was thus extremely intense. The situation was further aggravated in 1952, since it was not until after June 1952 that import restrictions, reintroduced at the end of 1951, began to demonstrate their first effects.

Brazil was also one of the countries most seriously affected by changes in the pattern of trade. Its cotton exports to Europe, in particular to the United Kingdom and France, decreased sharply in 1951-52, to such a degree that it became necessary to accumulate stocks. During 1950-51, in contrast with the immediate post-war years of the Second World War, Brazil showed a deficit with Western Europe in its trade balance, in services and maritime freight. These aspects of its balance of payments problems could be observed in the shortage of sterling balances and in the growing difficulty of obtaining short-term credits from certain European countries in the first half of 1952. In both 1950 and 1951, the net movement of foreign capital was negative and thus contributed a further problem to the balance of payments.

(d) *Chile*

The 30 per cent increase in Chile's import values during 1951 was smaller than in other Latin-American countries and corresponded to an equal growth of exports. During 1952, Chilean exports rose another 30 per cent over the 1950 figure, largely owing to greater copper shipments to the United States after several slack months. Chilean import values during 1952 were higher than in 1951, nevertheless the rate of growth was below that of exports, partly due to the reintroduction of control measures in 1952.

In Chile, remittances abroad of foreign investment income are of very great importance. In 1951 they totalled 51 million dollars to the United States alone; more than 25 per cent of the value of mineral exports remaining in the country. On the other hand, a small net amount was provided by tourists. In any event, there was still a current account deficit in the balance of payments.

(e) *Colombia*

Colombia, as a coffee-exporting country, maintained a firm position in its balance of payments during 1951 and 1952. Import values rose only moderately because domestic monetary policies tended to reduce effective demand, and through the effects of devaluation and tariff increases. Although there was an appreciable deficit on services, the net balance showed a surplus in 1951, mainly due to the capital inflow.

(f) *Cuba*

During 1951, Cuba was in a similar position to other countries by transferring dollars provided by trade with Europe and Japan to cover the wide gap in its current account with the United States. In 1952, however, there were difficulties in obtaining dollar payments for sugar exports to Europe.

Payments agreements with some certain European countries, mainly with France, allowed Cuba to maintain its reserves until mid-1952. Later, the export decline and the increase in imports caused a loss of 100 million dollars to the reserves. With the United States, the situation was more favourable during 1952 than in the previous year, due to greater sugar purchases in North America.

(g) *Mexico*

Mexico is the only free-exchange country to have a negative trade balance. This, however, was counterbalanced firstly by net receipts from tourists in 1950 and 1951, estimated at some 156 and 175 million dollars respectively and secondly by by other invisible items, which, together, enabled its transport services abroad to be covered, as well as a part of the income due on foreign investments. Mexico's 1951 current account deficit was chiefly due to a 48 per cent increase in import values, almost double the expansion of exports. During 1952, imports contracted sufficiently to halt the drain on reserves, and even to increase them in the second half of the year, by income obtained from other current account items in the balance of payments and by the repatriation of short-term capital.

Since it is on a dollar basis, Mexico was able to avoid the payments difficulties encountered by other countries to the south in 1951, even though similar conditions existed. For example, a substantial trade deficit with the United States was compensated for by a surplus with Europe, Japan and other areas. In the case of Mexico, however, the credit balance was largely covered in free dollars. In 1952, when mineral sales to the United States returned to normal, Mexico's deficit with that country was reduced to small proportions. It was therefore possible to avoid the danger of accumulating European credits which might at any moment become inconvertible. The trade surplus with Europe decreased sharply, while it practically disappeared in the case of Japan.

(h) *Peru*

During 1951, an increase of 50 per cent was recorded in the value of Peruvian imports, continuing to rise rough 1952. There was, likewise, a substantial increase exports. This, together with an appreciable renewal investments, enabled Peru to maintain a relatively ood exchange position, even though it was somewhat ampered by the inconvertibility of sterling balances.

(i) *Uruguay*

As in the case of Argentina, Uruguay was affected by ie wool crisis. Exports declined in 1951 and decreased ven further during 1952. In the last quarter of 1951, the alue of these exports was equivalent to only one-third f that in the same period of 1950, when world wool uotations were extremely high. Import values in 1951 ere more than 50 per cent above 1950, but diminished 1952 because of the introduction of controls, so that the ver-all trade deficit was slightly lower. To a small extent, ruguay has been able to compensate its deficit balance y exchange receipts from tourists, but other services iow a net outflow of funds. Net capital movements have een small.

(j) *Venezuela*

Because of the growing world demand for petroleum nd Venezuela's exceptionally favourable conditions for roduction, export values rose progressively in 1951 and 952. Despite the increase in imports, exports continued provide a favourable balance. The 640 million dollar irplus in the 1951 trade balance enabled Venezuela, as previous years, to meet heavy obligations on foreign ivestment income; in the case of the United States, this mounted to 278 million dollars during 1951. Such ayments, plus other expenditures for services, totalled 00 million dollars in the same year. Commerce with urope and other Latin-American countries provided enezuela with a favourable foreign trade balance, lthough its United States deficit in the first half of 952 was higher than in the preceding year. But Veneuela's reserves rose steadily, and in September 1952, eached the unprecedented level of 527 million dollars. he net movement of capital, however, showed a deficit 1951 and 1952.

(k) *Central America and the Republic of Panama*

A continuous increase in gold and dollar reserves has een a common feature of all Central American countries, nd is largely the effect of favourable coffee prices. In 951, the value of exports from Nicaragua and El alvador was also increased by high cotton prices, which, owever, had dropped by 1952. Owing to this decline, iese two countries for the first time had difficulty in btaining free exchange from cotton exports and thus ere obliged to make arrangements to acquire a higher roportion of European goods. In contrast, foreign exhange accruing from coffee exports in 1952 appears to ave surpassed the 1951 figure. With the exception of uatemala and Panama, the value of Central-American nports rose substantially in 1951, and even further uring 1952. Since 1951, Nicaragua and Costa Rica have elaxed their import restrictions considerably. Taken as whole, and despite the sharp increase in imports, the alance of payments of these countries remained satisactory in 1952. This was also partly due to capital which as continued to flow into the area, especially to Costa ica, El Salvador and Honduras.

4. INCOME PAID ON FOREIGN CAPITAL

In 1951, the dollar current account deficit exceeded ,000 million dollars, of which Latin-American payments to the United States for interest and dividends on capital investments were 731 millions. (See table 78.) The latter figure represented a 10 per cent increase over 1950 remittances. In addition to payments made to the United States, similar transfers took place during 1951 with Europe, estimated at 80 million to 100 million dollars, but the latter have been decreasing in recent years. Thus, the problem of servicing foreign private capital is essentially a matter of dollar transfers.

Table 78. Net payments of Latin-American countries to the United States for servicing investments, 1946–51

(Millions of dollars)

	1946–49 Annual average	*1950*	*1951*
Argentina	21	8	17
Brazil	39	76	83
Chile	41	43	51
Colombia	10	18	18
Cuba	46	69	76
Mexico	28	34	42
Peru	10	14	33
Venezuela	161	324	278
Others	72	78	133
TOTAL	429	664	731
TOTAL excluding Venezuela	268	340	453

Source: United States Department of Commerce, *Survey of Current Business.*

A substantial part, some 40 per cent, represents the yield on North American investments in Venezuela, principally petroleum. The remainder is distributed among Brazil (11 per cent), Cuba (10), Chile (7), Mexico (6), Peru (5) and others. The importance of these payments varies as between the different countries. Venezuela, for example, has been able to meet them without impairing its exchange position, whereas in Brazil, Chile and Peru their relation to total dollar income is one of the factors contributing to insufficient reserves.

The increase of foreign investment income has been closely linked with the rise in international raw materials prices observed since 1950, and to a certain extent it has therefore fluctuated proportionately with the total value of exports. This relationship, however, has not been so direct for such countries as Brazil and Mexico, where a growing proportion of external capital is being invested in manufacturing industries.

5. LONG-TERM CAPITAL MOVEMENTS

In view of the common deficits on current account, arising out of special factors existing in 1951 and 1952 (although not necessarily unconnected with tendencies observed in previous years), long-term capital movements failed to provide Latin America with sufficient foreign exchange to achieve an equilibrium in its balance of payments. While this is generally true, it is even more applicable to those countries which, in recent years, have experienced great difficulty in settling large dollar deficits without adequate reserves or sufficient convertible balances obtained from trade with Europe or other countries.

Table 79. Long-term capital movements from the United States to Latin America, 1947–51
(Millions of dollars)

	1947	1948	1949	1950	1951	1952
1. Private long-term U.S. capital:						
New direct private investments [a]	342	293	365	130	187	244
Other private long-term investments	−73 [b]	−46 [b]	−19	−27	−29	−34
Net movement	269	247	346	103	158	210
2. Export-Import Bank						
Disbursements	71	59	77	74	−37	−100
Repayments	−25	−31	−34	−46	−39	−44
Net movement	46	28	43	28	−2	56
3. International Bank for Reconstruction and Development [d]						
Disbursements	–	–	36	39	57	66
Repayments	–	–	–	–	–	−1
Net movement	–	–	36	39	57	65
4. Net movement of Latin-American long-term capital with the U.S.	4	−10	−4	−31	−9	−8
Net long-term capital movement to Latin America (1–4 inclusive)	319	265	421	139	204	323

Source: United States Department of Commerce, *Survey of Current Business.*

[a] Excludes sales of vessels to U.S. controlled Latin-American operators, amounting to the following:

	1947	1948	1949	1950	1951	1952
To Panama	110	23	64	61	1	–
To Honduras	7	2	–	–	–	–
	117	25	64	61	1	–

[b] In the absence of specific data, this was estimated as the difference between the reported flow of direct investments and balance of payments figures for total private long-term capital.

[c] Excludes 92 million U.S. dollars transferred to Argentina to assist in the liquidation of part-due dollar obligations to U.S. commercial creditors.

[d] Includes a sum in Canadian dollars and other currencies.

Latin America's total current account deficit with the rest of the world in 1951 amounted to over 750 million dollars. This was largely covered by a reduction of some 300 million in monetary reserves and of the increase in short-term debits, while net receipts of long-term foreign capital from various sources contributed 450 million dollars.[3] Capital inflow from the United States or other areas with available dollars amounted to some 380 million dollars, and at the same time there was a net income of 70 millions from other sources. After discounting amortization, most of the net receipts of United States capital (including investments by the International Bank for Reconstruction and Development) consisted of private capital, since official and international sources together accounted for only 55 million dollars. (See table 79.) Net private capital receipts of 158 million dollars were 590 millions less than investment income and dividends paid to the United States by Latin America in that same year.[4] Thus, from a balance of payments viewpont, it is quite clear that private external capital does not contribute to Latin America's net foreign-exchange receipts, a fact amply illustrated in 1951 when 70 per cent of the dollar deficit represented profits and interest on foreign capital.

Varying tendencies were observed during 1952. There was a total of new United States private direct investments of some 250 million dollars; thus, with the increase in loans by the Export-Import Bank and the International Bank for Reconstruction and Development, the aggregate long-term capital movement from the dollar area to Latin America was more than 50 per cent higher than in 1951.

Naturally, the importance of private foreign capital to Latin America's economic development cannot only be gauged from the total net inflow of funds. It is also necessary to take into account reinvested earnings, which have reached appreciable levels in recent years. Reinvested earnings of North American capital provided 38 per cent of the total increase in investments between 1946 and 1951, and 57 per cent in a single year, 1951. The appreciable growth of direct investment in manufacturing industries (now accounting for 18 per cent of total United States private investments in Latin America) was due in part to reinvested earnings which could not

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[3] This figure of 450 millions includes more than 150 millions of reinvestments, which in reality do not represent availabilities outside the region.

[4] This does not include reinvested earnings.

Table 80. United States direct private investments in Latin America, by economic activities, 1949–51

(Millions of dollars)

	Manufacturing	*Mining and smelting*	*Petroleum* [b]	*Distribution*	*Agriculture*	*Public utilities*	*Miscellaneous*	*Total*
1949								
Net capital movements	–	36	294	14	[a]	12	9	365
Reinvestments	71	10	26	12	[a]	7	10	136
TOTAL	71	46	320	26	[a]	19	19	501
1950								
Net capital movements	33	24	−5	32	—	20	26	191
Reinvestments	55	5	−5	13	1	4	3	76
TOTAL	88	29	−10	45	1	24	29	267
1951								
Net capital movements	83	56	−49	47	34	−11	26	187
Reinvestments	90	38 [d]	83 [d]	29	3	3	6	252 [d]
TOTAL	173	94	34	76	37	−8	32	439
1946–51								
Net capital movements	206	145	694	172	59	−34	115	1,405 [c]
Reinvestments [e]	378	53	184	88	94	65	32	863 [c]
TOTAL	584	198	878	260	153	31	147	2,268 [c]

Source: United States Department of Commerce, *Survey of Current Business*.

Note: "Reinvestments" represent the undistributed proportion of the net earnings of foreign subsidiary companies. The undistributed portion of branch company earnings is included in the flow of capital from the United States to Latin America.

[a] Included under "Miscellaneous."

[b] "Net capital movements" preclude sales of vessels to U. S. controlled Latin-American operators. (See note [a], table 13.)

[c] The total is not equivalent to the sum of the separate items, due to subsequent revision of the former.

[d] Includes "other" changes, amounting to 33 million dollars, under "Mining and smelting", and 7 million dollars in the petroleum industry. These changes consist mainly of adjustments in book values, such as write-ups of assets or losses on liquidation.

[e] Also includes "other" changes, amounting to 12 million dollars during the period 1946–49.

remitted abroad because of the lack of exchange and
trictions imposed on its transfer. New investments
counted for about half of the increase in this sector
ring 1951. (See table 80.) Reinvested earnings played
important part in Venezuela's petroleum industry, and
fact accounted for the entire net capital increase during
51.

The value of total United States private direct investment
Latin America in 1952 will also depend to a large extent
the effect of restrictions on income remittances; the
arp decline in investment income payments in 1952
ay have resulted in a corresponding increase in re-
vestments.

Countries experiencing a major increase in North
nerican private investment during recent years were
azil, Chile, Cuba, Mexico and Venezuela. But while
w net investments, that is, excluding reinvested earnings,
ve been nil or negative in Venezuela since 1950 (fol-
ving the peak investment period in petroleum during
46-49), they have grown in the four other countries.
1951, 20 million dollars of United States capital was
thdrawn from Venezuela, whereas in Brazil, Chile, Cuba
d Mexico there was an aggregate increase of 188
llions, representing the total net expansion effected in
of Latin America. (See table 81.) In 1950, only 130
llion dollars of new United States capital had been
vested in these countries. The greater part of the in-
ease in Brazil and Mexico was directed to manufacturing industries, whereas it was applied to mining in Chile and other activities in Cuba.[5]

United States Government loans from the Export-Import Bank have made important contributions to certain basic sectors of the Latin-American economy, especially electric power and transport. However, the utilization of long-term loans by this bank, excluding repayment, was less in 1951 than in 1950, with the exception of a 92 million dollar commercial loan granted to Argentina. In contrast with the 37 millions disbursed (see table 79), it should be noted that amortization of earlier loans amounted to 39 million dollars in 1951. During the first nine months of 1952, the movement of Export-Import Bank funds was slightly higher, becoming considerably greater by the final quarter, to reach 100 millions for the whole year, excluding amortization. At the end of 1952, 379 million dollars had already been authorized, although their disbursement was subject to pending negotiations or delays in the delivery of electrical and transport equipment. Among important operations by the Export-Import Bank, a mention must be made of the loans of some 56 million dollars to Mexico for railway rehabilitation and

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[5] In 1951, according to official sources, aggregate United States capital invested in Latin-American manufacturing industries was 1,017 million dollars, compared to 433 million dollars for 1945. This constituted a greater increase than that in other sectors of economic activity.

Table 81. New movements of United States direct private capital to Latin America, by countries and economic activities, 1949–51

(Millions of dollars)

	Years	*Manufacturing*	*Mining and smelting*	*Petroleum*	*Public utilities, distribution and others*	*Total*
1. Venezuela	1949	7	15	218	5	245
	1950	3	18	−19	5	7
	1951	3	12	−42	7	−20
2. Brazil	1949	13	1	18	−1	31
	1950	13	1	6	4	24
	1951	57	...	22	17	96
3. Chile	1949	...	21	...	3	24
	1950	3	13		7	23
	1951	1	38		5	44
4. Mexico	1949	−7	−4	1	2	−8
	1950	10	−11	1	17	17
	1951	24	...	−3	7	28
5. Cuba	1949	...	1	...	−2	−1
	1950	2	[b]	1	13	16
	1951	3	[b]	4	13	20
6. Others [a]	1949	1	2	77	−6	74
	1950	2	3	45	−7	43
	1951	−5	7	−21	37	18
TOTAL [a] [c]	1949	14	36	294	21	365
	1950	33	24	−5	78	130
	1951	83	56	−49	96	186

Source: United States Department of Commerce, *Survey of Current Business.*

[a] Excluding sales of vessels to United States-controlled Latin-American operators (see note [a] to table 79).

[b] Included under "Others".

[c] The sum of the individual country entries in mining and smelting, petroleum and other activities does not equal the area totals for those industries, because country detail has been combined under "Others" in some cases to avoid showing figures for a single company. For example, the disinvestments in "other" activities of "other" Latin-American countries, shown in the table, consist mainly of an outflow of capital from the Peruvian petroleum industry.

of 150 millions to Brazil for electric power, manganese mines, railways and other purposes.

The International Bank for Reconstruction and Development continued to provide long-term capital for basic development in different Latin-American countries. Its total loans to Latin America by the end of 1952 amounted to 364 million dollars, about one quarter of the Bank's total operations since it was established in 1946. (See table 82). These loans were distributed among nine Latin-American countries, and almost 75 per cent of the sums authorized were directed towards increasing electric power. Most of the remainder has been utilized for road construction, railway rehabilitation and agricultural mechanization. By the end of 1952, there still remained an undisbursed total of 157 million dollars. Funds actually utilized amounted to 57 million dollars in 1951 and 66 millions in 1952. (See table 79.)

6. BASIC PAYMENTS PROBLEMS IN LATIN AMERICA

The situation in 1951 and 1952 again emphasized the basic disequilibrium of Latin America's balance of payments, caused partly by the inconvertibility of European debits to leading South American countries and partly by the effect of development programmes (with their inherent inflationary tendencies) on imports from the dollar area, especially the United States. Neither the free exchange surplus obtained in some years from trade with other areas of the world, nor the income from private capital or loans, fully compensated the United States current account deficit. While, there was an inflow of some new capital, there was, also some measure of European and North American disinvestment; indeed, this caused the net volume of long-term capital moving to Latin-America to be less than the annual servicing of invested capital. Thus, the burden of any sharp disequilibrium in the balance of payments, such as occurred in 1951 and 1952, must fall on monetary reserves and the limited possibilities for short-term credit. These two years, during which there was also a considerable shortage of free exchange in European countries, have demonstrated Latin America's declining prospects for maintaining a current account surplus with Europe. These prospects, moreover, depend on changes in European import policies, or in United States policies of aid to Europe, through dollar payments for European imports from other areas of the world such as Latin America.[6]

During the past two years, the quantum and value of exports to the United States, almost the only available

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[6] European payments to Latin America with Marshall Plan dollars represented an important factor in the balance of payments for 1948-49. In this connexion, and as regards the general post-war situation, see the joint ECLA/ECE *Study of Trade between Latin America and European*, chapter I (document E/CN.12/225, United Nations Publications, Sales No.: 1952. II.G. 2).

Table 82. Loans to Latin America authorized by the International Bank for Reconstruction and Development [a]

(Millions of dollars)

	1947	*1948*	*1949*	*1950*	*1951*	*1952*	*Total [b] 1947–52*	*Utilized*	*Balance*
To Latin America:									
Brazil	–	–	75.0	15.0	15.0	37.5	142.5	95.9	46.6
Chile	–	16.0	–	–	1.3	–	17.3	12.6	4.7
Colombia	–	–	4.9	6.1	18.9	25.0	55.0	22.7	32.3
El Salvador	–	–	12.5	–	–	–	12.5	7.6	4.9
Mexico	–	–	24.1	36.0	–	29.7	80.3	47.8	32.5
Nicaragua	–	–	–	–	5.3	–	5.3	2.8	2.5
Paraguay	–	–	–	–	5.0	–	5.0	–	5.0
Peru	–	–	–	–	–	3.8	3.8	0.7	3.1
Uruguay	–	–	–	33.0	–	–	33.0	7.4	25.6
Total to Latin America	–	16.0	116.5	90.1	45.5	96.0	354.7	197.5	157.2
Total to the world	492.8	32.0	199.9	279.2	228.5	261.0	1,493.5	996.5	497.0

Source: International Monetary Fund, *International Financial Statistics.*

[a] Current total less cancellations.

[b] The total does not correspond to the sum of individual years owing to cancellations.

ns for obtaining exchange for imports, were affected
market and price fluctuations resulting mainly from
tively abrupt changes in raw materials stocks, or
n rearmament policy. It is nevertheless clear that
orts to Europe are limited by bilateral payments prob-
s and by European exchange shortages, which might
ny time require the application of radical measures.
pite European efforts to regain their former position
Latin-American markets, amply illustrated by the in-
ise in Germany's exports during 1951, the prices of
in-American products imported from Europe are gen-
ly higher than from the United States, and there are
blems resulting from Europe's policy of supplying
sterling area and of giving a new stimulus to rearma-
nt.

substantial share of the increase in Latin America's
netary reserves, by the end of 1950 and the first half
1951, resulted from an improvement in the region's
ns of trade, without any appreciable increase in the
ort volume. The quantum of United States imports
n Latin America has in fact decreased since the end
he Second World War, not only as regards the total
ume but also in ratio to the gross national product.
artial cause for this structural change is the stationary
dency of Latin America's exportable production. Most
Latin America's exports to the United States consist
ropical foodstuffs, industrial raw materials being im-
tant for only a few countries. The production of
dstuffs, coffee in particular, has not varied substantially
relation to pre-war levels. In other cases the consump-
capacity of the North American market is limited.
ilar circumstances have been observed in European
ntries, where they are aggravated by the dollar shortage which compels Europe to restrict as much as possible its imports from Latin-American free-exchange countries. At the same time, Europe was unable to maintain its imports from the other group of countries in the region, in part owing to the lack of exportable meat and wheat from Argentina.

The main problem, and one increasing in importance, is to determine whether Latin America's monetary reserves —in view of the balance of payments conditions described above—are adequate to meet the types of fluctuations observed in recent years. By mid-1952, among the countries whose trade is largely covered by bilateral payments agreements, except Peru, net gold and dollar reserves were lower or only slightly higher than in 1948, when they reached their lowest level since the Second World War. Because of the rise in import prices since the end of the war, especially from the end of July 1950, it is evident that the level of reserves in terms of purchasing power is hardly adequate for this group of countries (including Argentina, Brazil, Chile and Uruguay) to meet the appreciable decline in foreign exchange receipts from exports. Domestic monetary policies have thus tended to become less expansionist than in past years. Nonetheless, it seems unlikely that there will be any substantial relaxation of the import controls used to ensure that the composition of imports is compatible with economic development programmes, unless a far-sighted and vigorous programme for import substitution and export expansion is adopted. In solving exchange crises, the drastic control measures that have frequently been applied during recent years, will inevitably continue to play an important role.

Chapter III

THE COMPOSITION OF IMPORTS AND EXPORTS AND THE TERMS OF TRADE

1. Introduction

The decline of the region's imports, occasioned by balance of payments problems during 1952, reversed the rising tendency of the quantum of imports, observed since 1947-49 in most of the Latin-American countries. In fact, having reached, in 1951, a maximum of 7,437 million dollars, calculated at 1948 prices, imports returned to a more normal level, estimated at 6,754 millions for 1952.

Purchasing power accumulated throughout 1950-51, as a result of development trends and of the uncertain prospects for future supplies, causing the quantum of Latin-American imports in 1951 to attain a hitherto unprecedented level. This situation occurred despite a slight deterioration (1.2 per cent) in the aggregate terms of trade of the twenty Latin-American countries. This factor, together with an almost constant quantum of exports, generally reduced the capacity of exports to pa for imports by 1.9 per cent. (See plate 34 and tables 83 84, and 85.)

However, the over-all figures show marked difference arising from the alterations in the individual position o many countries. The new maximum, which Latin-American imports reached in 1951, representing an increase o 22.8 per cent over the already high average of the quantum for the period 1947-49, was primarily due to th growth of imports in Brazil, Cuba, Mexico and Uruguay (See plate 35.) Although on a smaller scale, Peru Ecuador, Chile, the Central American republics and th Republic of Panama, the Dominican Republic and Hait also contributed to this result. On the other hand, contractions in the volume of imports were observed in Argentina Venezuela and Bolivia.

Table 83. Latin America: Quantum of exports, by countries [a]

	1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*	*1952* [b]
			(1947–49 = 100)	
Total	*6,353.6*	*102.8*	*102.0*	*87.8*
Countries with mining exports	*2,175.7*	*111.1*	*118.9*	*123.8*
Bolivia	111.1	98.2	104.7	104.5
Chile	312.8	89.1	92.7	99.9
Mexico	456.1	118.2	109.7	109.2
Peru	157.0	119.4	125.5	135.0
Venezuela	1,138.7	114.4	130.3	136.5
Countries exporting tropical agricultural products	*2,420.7*	*90.1*	*95.7*	*83.8*
Brazil	1,136.6	82.8	89.2	65.9
Colombia	289.8	92.6	102.0	102.9
Costa Rica	27.8	92.1	86.8	..
Cuba	660.8	93.1	100.8	92.9
Dominican Republic	89.1	105.9	111.6	125.6
Ecuador	42.1	134.5	101.5	135.4
El Salvador	46.5	108.2	96.3	90.3
Guatemala	50.8	92.8	89.0	108.6
Haiti	31.8	103.8	99.8	101.4
Honduras	18.6	106.0	99.6	..
Nicaragua	16.4	128.2	140.0	..
Republic of Panama	10.4	90.8	103.9	120.2
Countries exporting temperate agricultural products [c]	*1,757.2*	*110.2*	*89.8*	*48.9*
Argentina	1,570.5	108.9	90.1	40.8
Uruguay	186.7	119.7	88.1	117.2

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] The countries were classified according to the structure of their exports and not necessarily according to the general features of their domestic economy.

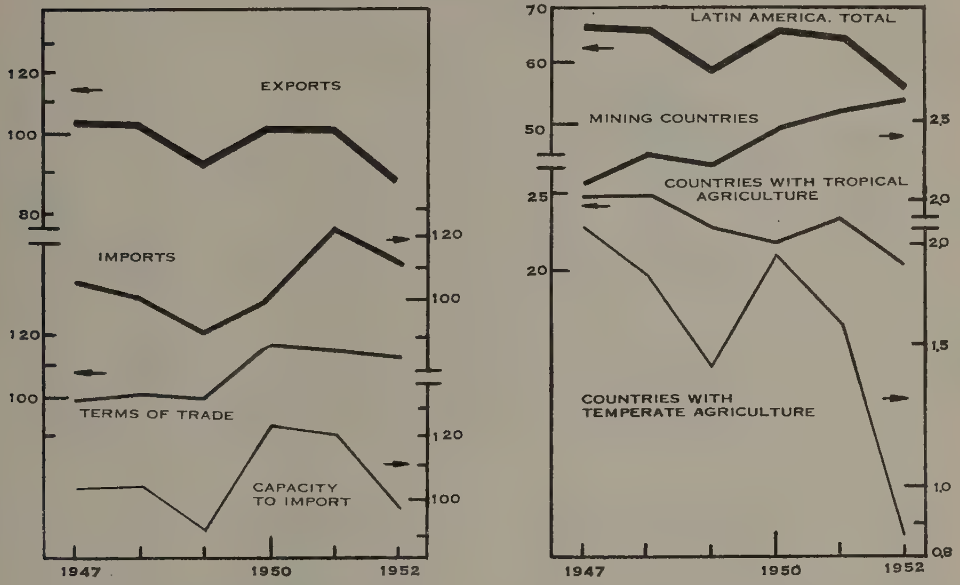
[b] Provisional estimates based on partial data.

[c] Excluding Paraguay, for which no data were available.

Note: National export statistics often adopt arbitrary valuation methods for certain commodities, particularly bananas and certain minerals. Although it is evident that the prices of commodities in this category are under-valued, the actual value is not known and the official figures are thus used in the above table.

Plate 34

LATIN AMERICA: QUANTUM OF EXPORTS AND IMPORTS, TERMS OF TRADE AND CAPACITY TO IMPORT



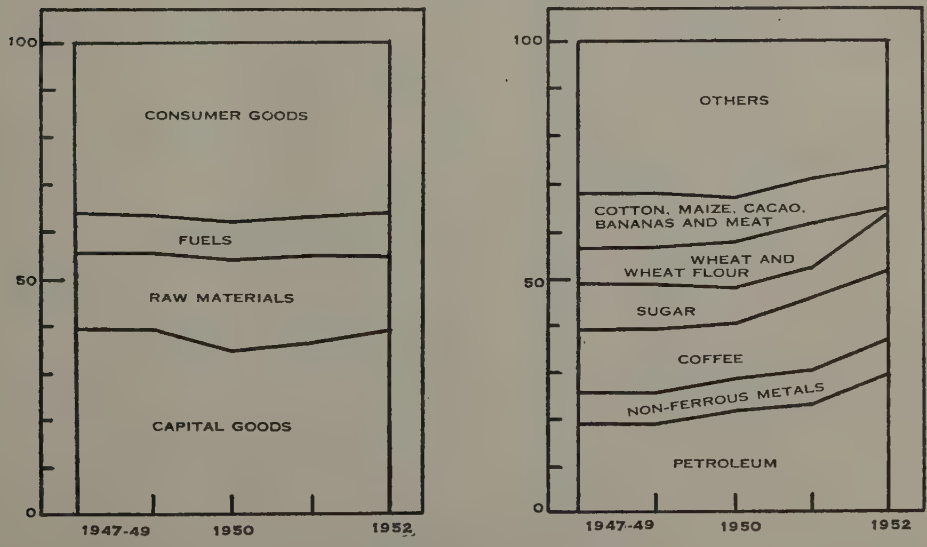
Indices of the quantum of exports and imports, the terms of trade and the capacity to import

1947-49 = 100

Quantum of exports by zones

Thousands of million dollars at 1948 prices

(Semi-logarithmic scale)



Distribution by groups of the quantum of imports

Distribution of export quantum by selected products

As a percentage of the total

(Natural scale)

Plate 35

QUANTUM OF IMPORTS BY GROUPS AND BY COUNTRIES IN LATIN AMERICA, 1947-52

Millions of dollars at 1948 prices

(Semi-logarithmic scale)

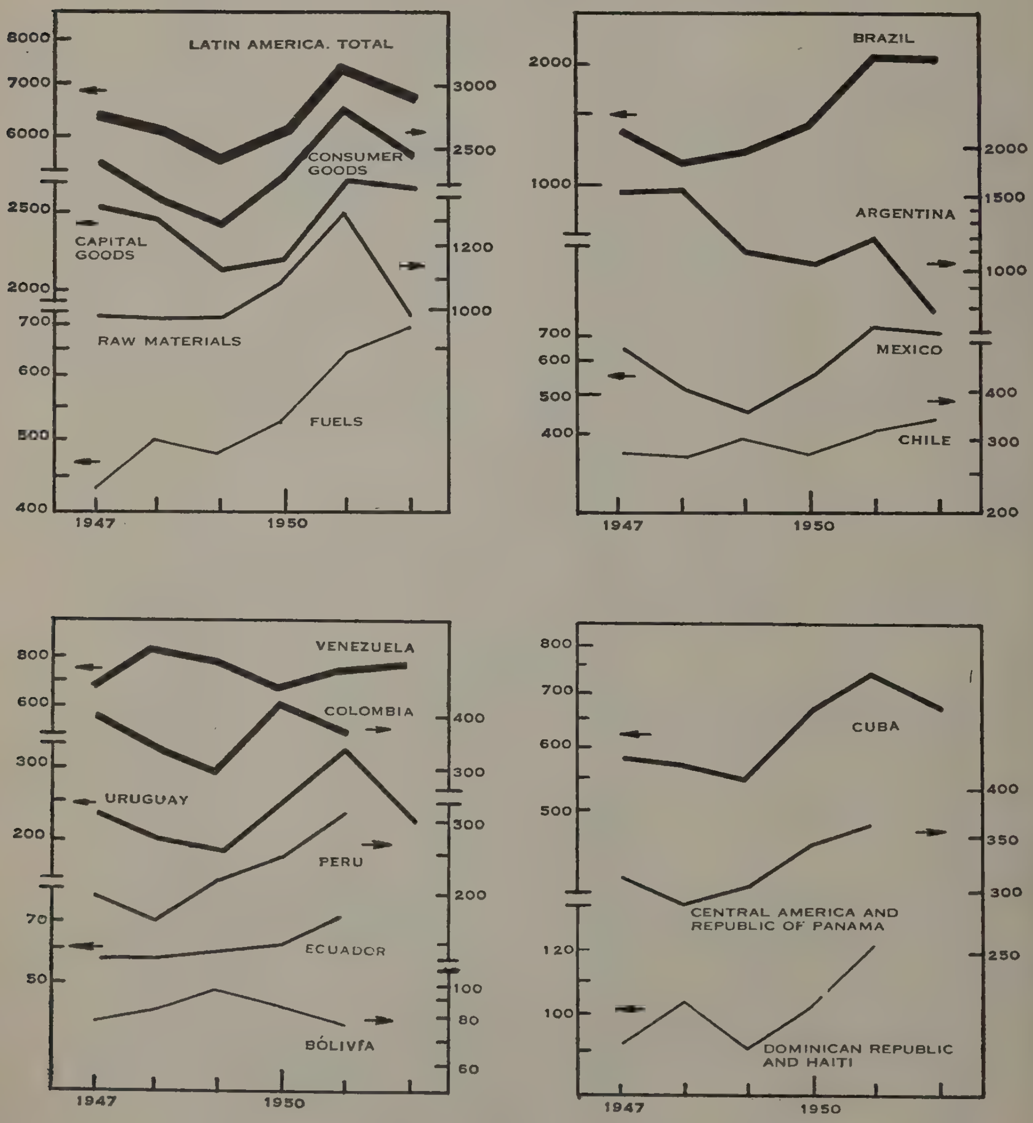


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Table 84. Latin America: Terms of trade and the capacity to import
(1948 = 100)

	Terms of trade					*Capacity to import* [a]				
	1947	*1949*	*1950*	*1951*	*1952* [b]	*1947*	*1949*	*1950*	*1951*	*1952* [b]
Latin America	*99.4*	*99.6*	*115.8*	*113.6*	*111.8*	*99.8*	*89.3*	*119.3*	*116.1*	*93.9*
Argentina	97.5	83.0	72.8	57.9	52.1	113.7	60.3	76.4	50.2	26.1
Bolivia	89.2	96.1	101.2	..	..	77.8	90.8	93.1	..	..
Brazil	106.3	109.7	180.9	181.4	177.4	106.7	98.7	145.1	156.2	143.6
Chile	95.6	100.2	113.2	123.9	132.8	90.7	90.0	95.7	109.2	125.9
Colombia	97.6	118.8	167.8	151.8	147.6	96.5	121.8	156.2	155.9	151.4
Costa Rica	99.5	121.8	156.4	172.2	..	80.8	110.2	130.6	135.3	..
Cuba	115.2	107.0	124.4	120.0	104.4	108.5	91.0	107.8	112.7	107.9
Dominican Republic	95.0	88.0	110.4	117.6	..	109.8	99.7	128.3	144.4	..
Ecuador	115.1	96.3	147.4	151.1	..	110.5	79.5	128.5	128.4	..
El Salvador	99.4	112.4	160.8	194.2	..	95.9	129.6	180.7	194.2	..
Guatemala	107.0	118.2	168.1	177.5	..	116.5	112.3	158.0	160.1	..
Haiti	98.2	108.2	143.1	173.5	..	103.3	111.7	152.7	178.2	..
Honduras	107.1	107.1	112.5	136.6	..	94.9	111.5	116.3	132.6	..
Mexico	96.7	89.2	92.1	110.1	97.2	89.8	93.2	107.9	119.7	102.7
Nicaragua	99.9	105.0	149.3	169.2	..	76.1	95.2	170.2	210.8	..
Peru	142.6	112.5	132.6	128.3	107.5	138.5	114.5	156.7	157.8	121.2
Republic of Panama	91.4	116.0	124.7	112.7	..	92.1	108.1	111.0	114.4	..
Uruguay	101.3	94.5	141.0	155.1	81.4	97.9	111.3	176.1	143.8	72.9
Venezuela	77.3	101.1	105.6	99.3	96.9	69.6	98.2	115.6	123.9	131.0

Source: Compiled by the Economic Commission for Latin America, based on official statistics.

[a] In reality, this represents "the capacity of exports to pay for imports", in accordance with the concept used in previous *Economic Surveys* and defined as the product of the terms of trade for the quantum of exports. This criterion differs from that in part I of this volume, which includes other sectors of the balance of payments.

[b] Provisional estimates based on partial data.

For exports, similarly, the high levels recorded in 1950 d 1951 were not attained in 1952 when the quantum eclined by approximately 15 per cent. This reduction as principally caused by the severe drought then pre- iling in Argentina, which practically suspended all real exports from that country. Further factors were wer sugar exports from Cuba and reduced cotton and cao exports from Brazil. Since these three countries exert nsiderable influence upon the level of total Latin-merican exports, it is not surprising to note the down- ard trend in plate 34, both for the total and for the o groups of countries with tropical and temperate imates. In contrast, both the relative and absolute posi- on of exports from mining countries improved during 52. A similar situation had occurred in 1951, although a less intense degree. At that time, the slight contrac- on in the quantum of total exports from the region was ainly caused by the decline in Argentina (17.3 per cent) addition to a reduction of Mexican exports (7.2 per nt) and of some other countries, whose share in the tal is relatively unimportant. However, with the excep- on of Argentina, Brazil, Chile and Uruguay and a few her countries with a reduced volume of exports, the 51 figures were higher than the average for 1947-49. some cases, such as Venezuela, Peru, the Dominican epublic and Nicaragua, substantial increases were ob- rved both in relation to the above-mentioned average d to the 1950 level (see table 83). Broadly speaking, those countries where mining (including petroleum) is prominent activity, the quantum of exports has shown rising tendency; in 1951, it was 18.9 per cent above the 47-49 level (see table 83 and plate 34). On the other nd, a downward tendency was noted, as compared with 47-49, in the republics where agricultural products are the main exports, 10.2 per cent for countries with a temperate climate and 4.3 per cent for those in tropical areas.[1]

The fluctuations of the terms of trade in the various countries also differed, owing to the influence of certain products, the prices of which determined the fluctuations of that coefficient. Basing the comparison on the year 1948, as was done in table 84 and the charts on plate 36, it will be seen that, since 1950, when a peak was reached, the terms of trade have been steadily deteriorating for Latin America as a whole. According to provisional and incomplete data, in 1952, they were 1.6 per cent below their 1951 position and 3.5 per cent beneath the aforementioned peak.

More complete statistical material is available for 1951, and it shows that, in the majority of countries in the region, the terms of trade were more favourable than that in the preceding year (see table 84 and chart 36), and much more satisfactory than the average for 1947-49. On the other hand, the Argentine coefficient dropped by more than 20 per cent in 1951 and by almost 50 per cent in 1952, following the trend observed since 1949. In fact, in 1952, this tendency was 48 per cent below its 1948 level. This decline, and the comparatively smaller deterioration in the terms of trade of Venezuela, Peru, the Republic of Panama and Cuba, brought about, in 1951, an aggregate deterioration of 1.9 per cent for Latin America as a whole. The unfavourable tendency observed in the above-mentioned four countries was primarily due to the influence of higher import prices, which rose more rapidly than those for exports. However, in 1950, the influence of these factors was adverse. As a result of the drop in

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[1] A detailed analysis of the situation by individual products appears later.

Plate 36

TERMS OF TRADE BY COUNTRIES, IN LATIN AMERICA, 1947-52

1948 = 100

(Natural scale)

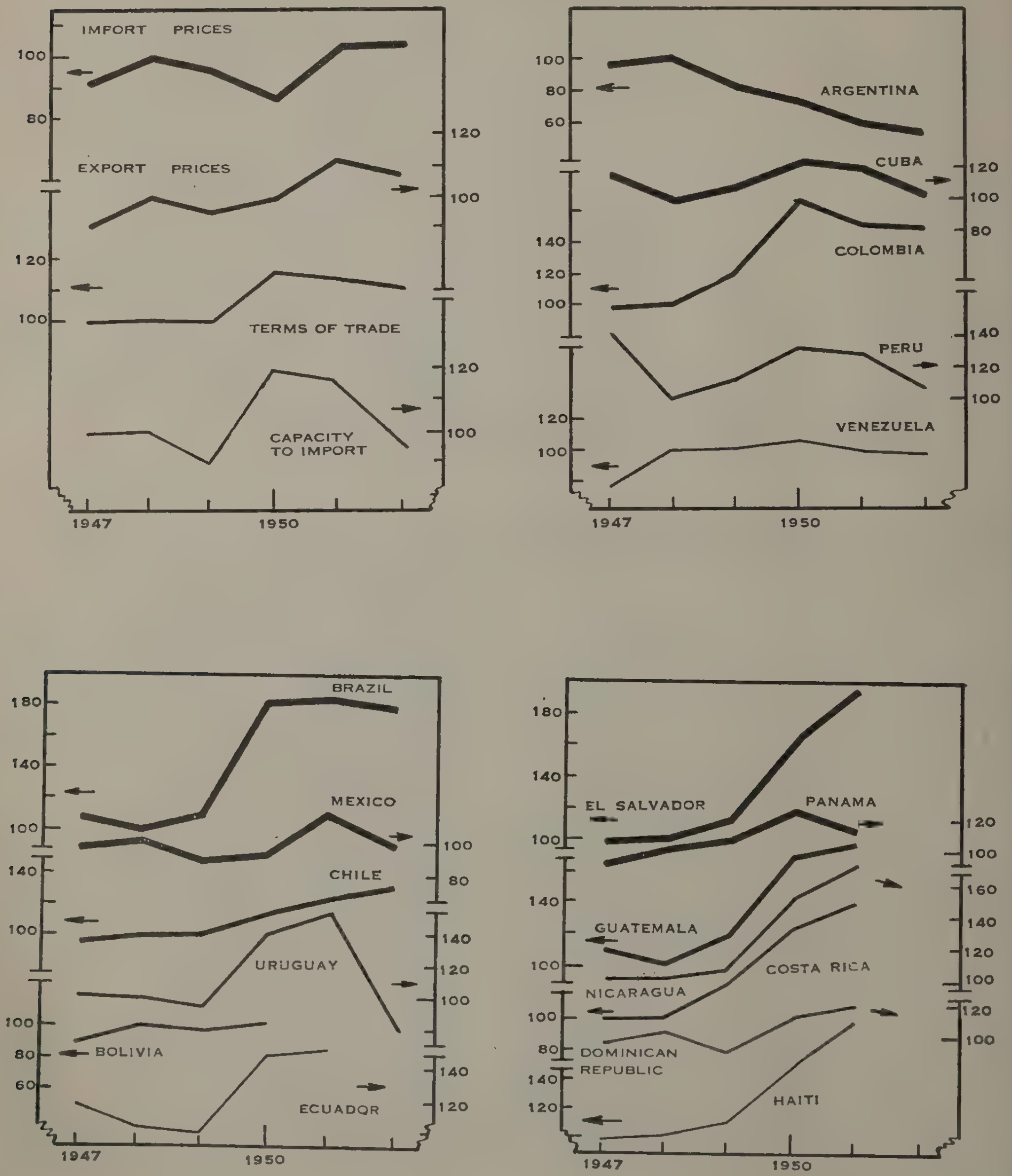

Table 85. Latin America: Quantum of imports, by groups [a]

	1947–49	1950	1951	1952 [b]	1947–49	1950	1951	1952 [b]
	(millions of dollars at 1948 prices)				*(percentage of the total)*			
TOTAL	*6,055.1*	*6,057.4*	*7,437.3*	*6,754.5*	*100.0*	*100.0*	*100.0*	*100.0*
Consumer goods	2,209.5	2,299.4	2,757.4	2,426.6	36.5	37.9	37.1	35.9
Raw materials	980.5	1,084.9	1,327.3	977.2	16.2	17.9	17.9	14.5
Fuels and lubricants	472.9	536.9	657.6	696.1	7.8	8.9	8.8	10.3
Capital goods	2,392.2	2,136.2	2,695.0	2,654.6	39.5	35.3	36.2	39.3

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] The f.o.b. values indicated in official statistics from Cuba, the Dominican Republic, Honduras, Guatemala, Nicaragua, the Republic of Panama, Bolivia, Ecuador and Venezuela, were transformed into c.i.f. prices by using the weighting factors published in *International Financial Statistics* (International Monetary Fund publication). Paraguayan imports were not included as the figures were unavailable.

[b] Estimates based on partial data.

port prices for that year and the general increase of port prices, the terms of trade were 14.1 per cent re favourable to Latin America than in 1949, and 14.0 cent higher than the average for the period 1947-49.[2]

As compared with the two preceding years, preliminary imates for the 1952 quantum of imports show changes the respective share of the different groups, emphasizing increase of capital goods at the expense of consumer ods and raw materials, these fluctuations resulting ncipally from the influence exerted by Brazil. The rpest reductions in consumer goods were those of tiles, ready-made clothing and motor vehicles, although ports of each of these clases remained above their 47-49 positions. The most striking contraction in raw terial imports were those of textile fibres and yarns, a result of which the 1952 figure was below that of ir 1947-49 level. As these groups declined, substantial reases occurred in fuel imports and those of certain es of capital goods.

The substantial volume of imports for 1951 did not atly modify their composition nor structure. In that r the distribution of purchases abroad by groups sely resembled that of the period 1947-49 (see table and plate 34), although an increase was observed in share of consumer goods and a decline in the imports capital goods. A similar situation had occurred in course of 1950.

In some countries, the apparent exhaustion of the ssibilities of substituting imports of consumer goods by mestic production (at least until further changes are ected in the productive structure) to a certain extent counts for this position. The need to maintain a min- um of consumer imports decisively influenced the rease in the proportion of this group to total imports. compared with 1947-49, foodstuffs in 1951 and 1952 se by 39.7 and 27.0 per cent respectively (see table 86), sorbing, during these two years, a total of 18.3 per cent the quantum of imports, wheat representing one-quarter reof. Imports of textiles and pharmaceutical goods rted heavy pressure on Latin America's capacity to port (7.5 per cent of the total), particularly in countries where domestic industrial development was weaker, although the total volume of imported textile manufactures was 24 and 28.7 per cent lower than the average for 1947-49. Increases in other less essential goods, such as motor vehicles and domestic appliances—which have a high income-elasticity of demand, and imports of which rose 54.7 and 25.8 per cent over the 1947-49 level, and 91.7 and 29 per cent above the 1950 level—accounted for an increasing proportion (7.2 per cent) of Latin-American imports, despite the restrictions normally enforced by certain countries in the region. In Latin America, these goods are generally in short supply, so that great advantage is customarily taken of favourable periods, in order to devote more foreign exchange to their acquisition. Hence, owing to the decline which occurred in 1952, imports of such goods have been drastically reduced, falling to a level well below that of the preceding year, although slightly higher than during 1947-49.

Raw materials gradually rose in proportion to total imports (18 per cent in 1951, against 16 per cent in 1947-49) as a result of the progress of industrialization. Raw materials were also strongly influenced, particularly in 1951, by the high rate of forward-purchasing caused by the fear of a general shortage. Thus, in 1952, sharp reductions may be observed in the volume of raw materials, while their relative position declined to 14.5 per cent of total imports. Expansion of this group as a whole, in relation to 1947-49, was 35.4 per cent. Chemical products, specifically, rose 65.7 per cent. Conversely, textile fibres declined 9.4 per cent in volume as compared with 1950 imports. However, the decreases noted in 1952 affected chemical products and yarns, principally, and to a lesser extent, textile fibres.

Fuels, mainly petroleum and its by-products, in 1952 accounted for 10 per cent of total imports, that is, slightly more than in preceding years, while their volume was 47.2 per cent higher than 1947-49 and 29.7 and 5.8 per cent higher than 1950 and 1951 respectively. While certain countries remained unable to develop their own fuel resources more rapidly, industrialization, transport and the requirements for electric power will continue to exact a high rate of liquid fuel imports.

In 1951, greater imports of consumer goods, raw materials and fuels caused a slight reduction in the proportion of capital goods as compared with 1947-49, although there was an appreciable expansion (12.7 per cent), in absolute terms, in relation to the earlier period. During 1952, the situation was reversed. Imports of consumer

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This should not obscure the fact that the terms of trade have not reached the levels recorded in the first decade of this century, er having been extremely low during the greater part of the 30's l 40's. Assuming that 1937 equals 100, the highest level of the t-war period (133.8) is only slightly above the levels for the iod 1901-05, and 1906-10, which were 130.6 and 131.9, re- ctively. However, by 1952, the earlier improvement had disap- red, the indices for that year being only 129.1 in relation to 1937.

Table 86. Latin America: Quantum of selected imports

	1947–49 (millions of dollars at 1948 prices)	1950	1951	1952[a]
		(1947–49=100)		
TOTAL	*6,055.1*	*100.0*	*122.8*	*111.6*
Consumer goods	*2,209.5*	*104.1*	*124.8*	*109.8*
Foodstuffs	973.9	120.5	139.7	127.0
Pharmaceutical goods and toilet articles	121.1	134.9	184.3	150.3
Textiles and clothing	443.8	81.8	76.0	71.3
Motor vehicles	181.5	80.7	154.7	106.7
Domestic and miscellaneous appliances	203.8	97.5	125.8	110.0
Raw materials	*980.5*	*110.6*	*135.4*	*99.7*
Textile fibres	88.7	119.5	108.3	90.1
Yarns	141.7	85.7	110.0	69.8
Chemical products	272.4	122.2	165.7	114.5
Fuels	*472.9*	*113.5*	*139.1*	*147.2*
Capital goods	*2,392.2*	*89.3*	*112.7*	*111.0*
Building materials	230.0	97.7	116.7	94.9
Other materials	463.3	98.5	112.5	87.2
Agricultural machinery and equipment	117.2	123.8	130.7	122.6
Transport and communications	575.8	73.6	111.9	242.2
Industrial and others	1,005.9	88.1	110.1	113.1

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.
[a] Estimated on the basis of partial data.

goods and raw materials declined while the relative position of capital goods remained equal to that of 1947-49. Although the quantum of capital goods was slightly lower than in 1951, it stood 11 per cent higher than the 1947-49 average.

The per capita import growth was equivalent to 5 per cent, pointing clearly to the general trend of Latin-American economic development policies, despite the limitations imposed by a somewhat restricted capacity to import as compared with the substantial volume of demand. During the past two years, imports of agricultural machinery transport, communications and industrial equipment increased fairly rapidly. However, although in 1951 imports of other groups of commodities, such as building and other materials, rose above their 1947-49 level, in 1952 they fell below this level.

2. COMPOSITION OF IMPORTS BY COUNTRIES

Although, in Latin America as a whole, the composition of imports has not varied to any appreciable degree, there are certain outstanding features among the individual countries, which should be mentioned in connexion with economic development. Significant changes occurred in the composition of Argentine, Chilean, Colombian and Venezuelan imports, consisting of a decrease in the proportion of capital goods. In Brazil, Uruguay, Peru and Mexico, quite the opposite tendency was evident. In Mexico, imports of capital goods now represent almost 50 per cent of the total quantum of imports. The growing importance of raw materials in relation to total imports may also be observed in Argentina, Colombia and Venezuela, whereas in other countries the proportion of these items has tended to decline. At present, fuels account for a greater part of aggregate imports in Argentina, Brazil, Chile and Uruguay. In other countries, their total volume in absolute terms has expanded at least proportionately with the increase of total imports. The similarities and differences can best be seen by examining the statistics for each Latin-American country separately, as shown below.

(a) *Argentina*

The deterioration in the Argentine balance of payments and the deflationary measures adopted by the government reacted on the volume of imports, which in 1952 declined 32.1 per cent, thus reversing the upward trend of 1950

Table 87. Argentina: Quantum of imports, by groups

	Average 1937–39	Average 1947–49	1950	1951	1952[a]	Average 1937–39	Average 1947–49	1950	1951	1952
	(millions of dollars at 1948 prices)					(percentage of the total)				
TOTAL	*1,330.2*	*1,401.9*	*1,019.7*	*1,183.2*	*803.4*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Consumer goods	534.7	297.4	121.7	145.8	94.7	40.2	21.2	11.9	12.3	11.8
Raw materials	264.7	342.6	301.3	398.6	218.6	19.9	24.5	29.6	33.7	27.2
Fuels and lubricants	109.1	147.9	174.3	198.1	205.3	8.2	10.6	17.1	16.8	25.6
Capital goods	421.7	612.4	422.4	440.7	284.8	31.7	43.7	41.4	37.2	35.4

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

d 1951. During the latter year, although the total lume of imports was 15.5 per cent lower than the erage for 1947-49 (see table 87), imports of non- sential goods appear to have been reduced to a min- um, judging by the drop in the proportion of consumer ods in relation to the total (12.3 per cent). Thus, in 52 a lower total volume of capital goods and raw aterials may also be expected.

A marked decrease in the volume of capital goods im- rts has been observed. In 1952 and 1951 these items presented 46.5 and 72 per cent of the average for 47-49, the per capita totals being estimated at only 54 d 66 per cent respectively of the figure for the earlier riod (see table 88), that is, equivalent to the level pre- iling during the highest three-year period of the pre-war ars, namely, 1937-39. However, as compared with 37-39, there was an appreciable alteration in the struc- re of imports. Consumer goods, which in 1937-39 ac- unted for 40.2 per cent of the total quantum of imports, ll in 1952 to 11.8 per cent of that total, while the relative oportion of raw materials and fuels increased substan- lly. Imports of capital goods also rose in relation to tal imports (see table 87), although in view of the 1952 ntraction of total imports, as compared with 1937-39 1.1 per cent), the 1952 volume of such goods (in abso- te terms) was almost equivalent to that of the above- entioned period.

The main decreases recorded in capital goods in 50-51, as compared with 1947-49, were those in equip- ent for transport and communications, but imports of ods for industrial purposes likewise diminished (see ble 88). Only miscellaneous materials and agricultural achinery showed increases of any importance; the latter se 17.7 per cent in relation to 1947-49, and, to judge om 1952 figures, this trend represented an improvement 24 per cent.

Argentina has become growingly dependent upon imported raw materials. Their quantum in 1951 was the highest recorded, although, to some extent, stock-piling against possible future shortages must undoubtedly have influenced this total considerably. Imports of raw materials in 1951 represented slightly over 33 per cent of the quantum of total imports. This figure for the most part reflects the country's need for chemicals which Argentina does not yet produce, such as certain types of acid, alkalis, essential oils, dyes, pigments, salts etc. Sacking for agricultural production likewise remained at a high level. In 1951 the demand for rubber was also abnormally high, while imports of metal goods increased by 29.8 per cent. The only sharp reduction occurred in yarns, as compared with 1947-49, particularly wool and rayon yarns, a similar decline being observed in 1952. In this latter year, a downward trend was also noted for sacking, paper, chemical products, rubber and metals, thus reducing the share of raw materials to 27.2 per cent of the total quantum of imports.

Similiarly, fuel requirements weigh heavily upon total imports. Their volume, which in 1951 was 33.9 per cent higher than the average for 1947-49, eventually accounted for 16.8 per cent of the total import quantum, while in 1952 their share rose to 25.6 per cent of that total. Petroleum imports supply about 60 per cent of domestic consumption, which at present is severely restricted. There is a continued demand for foreign coal, required for generating electric power and for the iron and steel and metal industries which cannot be substituted as yet.

The figures for the past few years seem to indicate that the possibilities for continued substitution of imported consumer goods are gradually being exhausted, at least until extensive structural changes have been effected in Argentine industry. Cotton textiles of certain qualities, motor vehicles and domestic appliances represented more than 40.2 per cent of imported consumer goods in 1951.

Table 88. Argentina: Quantum of selected imports

	1937–39 (1947–49 =100)	*Average 1947–49 (millions of dollars at 1948 prices)*	*1950*	*1951*	*1952*
				(1947–49=100)	
TOTAL	*94.9*	*1,401.9*	*72.7*	*84.4*	*57.4*
Consumer goods	*179.8*	*297.4*	*40.9*	*49.0*	*31.8*
Foodstuffs	173.0	69.0	55.9	65.1	56.5
Textiles	192.2	99.3	34.9	18.9	9.0
Motor vehicles	129.1	26.8	14.0	113.4	17.9
Domestic appliances	95.0	32.3	44.4	44.6	39.3
Raw materials	*77.3*	*342.5*	*88.0*	*116.4*	*63.8*
Yarns	68.0	59.6	48.5	58.4	55.9
Sacks	161.1	22.9	119.6	138.4	30.1
Woodpulp and paper	80.6	56.2	88.8	103.8	76.3
Chemicals	67.3	75.5	99.7	144.6	79.5
Rubber	81.0	7.9	140.7	203.0	25.3
Metals	93.7	27.1	103.7	129.8	69.0
Fuels	*73.8*	*147.9*	*117.8*	*133.9*	*138.8*
Capital goods	*68.7*	*612.3*	*69.0*	*72.0*	*46.5*
Building materials	76.0	57.4	100.0	99.7	61.0
Other materials	74.1	181.6	96.0	102.5	55.2
Agricultural machinery and equipment	89.5	20.9	114.4	117.7	124.0
Transport and communications	73.9	151.6	24.5	34.3	23.7
Industrial and miscellaneous	51.6	200.8	64.5	60.2	43.6

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

Table 89. Bolivia: Quantum of imports, by groups[a]

	Average 1947–49	*1950*	*1951*[b]	*Average 1947–49*	*1950*	*1951*
	(millions of dollars at 1948 prices)			*(percentage of the total)*		
TOTAL	*80.9*	*56.2*	*75.3*	*100.0*	*100.0*	*100.0*
Consumer goods	42.0	..	42.9	51.9	..	57.0
Raw materials	12.3	..	10.8	15.2	..	14.3
Fuels	5.3	..	3.9	6.6	..	5.2
Capital goods	21.3	..	17.7	26.3	..	23.5

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] The f.o.b. figures indicated in official statistics were transformed into c.i.f. prices by using the weighting factors published in *International Financial Statistics*, of the International Monetary Fund.

[b] Estimated on the basis of partial data.

The general supply of electrical appliances for domestic purposes and of motor vehicles is somewhat deficient. There are no immediate hopes of replacing such vehicles to any appreciable extent. On the other hand, certain special textiles are not produced under optimum conditions in Argentina. Bearing these facts in mind it is obvious why such commodities cannot be excluded from the list of imports. Domestic production of other groups of consumer goods such as foodstuffs, including tea, coffee, cocoa etc., consitituting 30.8 per cent of imports of this type, is likewise practically impossible, with the exception of tea.

Consequently, the structure of Argentine imports in the recent past emphasizes the difficulties for developing the economy, until the capacity to import is raised, since the weakness of that capacity obviously diminished the level of capital goods imports to a point below that required to maintain a high rate of economic development. Similarly, the inelasticity of imports will increase in view of the need to import more raw materials and fuels and the impossibility of further reducing imports of consumer goods.

(b) *Bolivia*

From the data available for 1952, it would appear that the quantum of imports has continued to diminish, following the same trend as in 1951, when imports were 7 per cent lower than for the period 1947-49. The items most seriously affected by these contractions were probably non-essential articles, such as durable consumer goods and certain raw materials, such as textile fibres and yarns.

The most striking feature of the changes which took place in the composition of Bolivian imports in 1951, as compared with the average for the period 1947-49, was the increase of consumer goods in relation to total imports and the reduction in the proportion of raw materials, fuels and capital goods. (See table 89.)

A reduction of 16.9 per cent was observed for all capital goods as compared with 1947-49, declining in every category, some of which were substantial. (See table 90.) These included agricultural machinery and equipment (42.9 per cent), other materials (23.8 per cent) and transport and communications equipment (23 per cent).

In 1951, a decrease of 12.2 per cent, as compared with 1947-49, was recorded in raw material imports, of which 71 per cent was made up of the following three products alone: textile fibres (cotton and wool), yarns (cotton and artificial silk) and chemical products (mostly dyes, acids, salts and explosives). Imports of yarns and chemical products increased 35.3 per cent and 18.4 per cent respectively, while a sharp contraction took place in textile fibres (60.6 per cent). Other raw materials of little relative importance to the total—timber and metals—also fell off considerably.

A downward trend was also observed in fuel imports, consisting almost entirely of petroleum and its by-products, which decreased 26.4 per cent.

Despite structural changes which resulted in the relative expansion of consumer goods, they showed an increase of only 2.1 per cent as compared with the 1947-49 average. Certain items, such as pharmaceutical goods and toilet articles, domestic appliances and textile and ready-made clothing improved to some extent. In 1951, food imports averaged practically the same proportions as in 1947-49 though from the per capita standpoint they decreased somewhat. From the information available, it would appear that in 1952 a marked contraction took place in Bolivian imports, owing largely to the reduction in the volume of goods supplied by Argentina. In 1951, four products, namely, wheat, wheat-flour, sugar and cattle accounted for 62 per cent of food imports, although

Table 90. Bolivia: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1951* *(1947–49 = 100)*
TOTAL	*80.9*	*93.1*
Consumer goods	*42.0*	*102.1*
Foodstuffs	22.9	101.3
Textiles and clothing	9.2	110.9
Pharmaceutical goods and toilet articles	2.9	113.8
Domestic appliances	2.1	114.3
Motor vehicles	0.8	50.0
Raw materials	*12.3*	*87.9*
Textile fibres	3.3	39.4
Yarns	1.7	135.3
Chemical products	3.8	118.4
Fuels	*5.3*	*73.6*
Capital goods	*21.3*	*83.1*
Building materials	2.5	80.0
Other materials	2.1	76.2
Agricultural machinery and equipment	0.7	57.1
Transport and communications	6.1	77.0
Industrial and miscellaneous	9.9	90.9

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

Table 91. Brazil: Quantum of imports, by groups

	Average 1937–39	*Average 1947–49*	*1950*	*1951*	*1952*	*Average 1937–39*	*Average 1947–49*	*1950*	*1951*	*1952*
	(millions of dollars at 1948 prices)					*(percentage of the total)*				
TOTAL	*864.9*	*1,223.5*	*1,388.8*	*2,095.4*	*1,941.1*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Consumer goods......	362.4	428.2	490.2	792.1	617.3	41.9	35.0	35.3	37.8	31.8
Raw materials........	142.7	150.5	190.3	291.3	196.1	16.5	12.3	13.7	13.9	10.1
Fuels...............	87.4	146.8	187.5	247.2	264.0	10.1	12.0	13.5	11.8	13.6
Capital goods.........	272.4	498.0	520.8	764.8	863.7	31.5	40.7	37.5	36.5	44.5

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

e volume of wheat and cattle for that year was con- derably smaller than in 1947-49.

(c) *Brazil*

During the first half of 1952, Brazilian imports reached higher level than during the same period in 1951. ubsequently, their trend was sharply reversed and the onsequent contraction was such that the total volume for 952 was 7.4 per cent lower than that of the preceding ear. Nevertheless, in view of the substantial quantum f imports in 1951, the relatively small-scale decrease of 952 does not appear to have seriously affected the eneral acquisition of foreign supplies.

The quantum of imports in 1951 was the highest on ecord in Brazil—71.3 per cent above the 1947-49 level— e proportion of consumer goods being slightly higher relation to the total and that of capital goods somewhat wer. On the other hand, the volume of capital goods se exceptionally, representing 44.5 per cent of all nports, while the proportion of consumer goods and raw aterials declined.

In fact, the principal changes in the composition of razilian imports took place between 1930 and 1945. A comparison between imports in 1937-39 and those in 1947-49, for example, shows a marked alteration in their structure, with a substantial decline in the proportion of consumer goods and an improvement in that of capital goods (see table 91).

Notwithstanding the decrease in the proportion of capital goods which occurred during the past five years, their quantum in 1951 was 53.6 per cent above the average for 1947-49. However, in 1952, this tendency was reversed, when the share of capital goods rose sharply, so that their proportion to total imports was 73.4 per cent higher than that of the aforementioned three-year period, indicating the degree of domestic investment in imported goods (see table 92). In view of the extent of this expansion in 1951 and 1952, all the categories of goods included in this group showed increases, although the most striking of these was that of goods for industrial purposes generally and equipment for transport and communications, building materials and agricultural machinery and equipment.

There can be no doubt regarding Brazil's reliance on foreign markets for certain raw materials; however, as a result of substantial imports in the course of the past

Table 92. Brazil: Quantum of selected imports

	Average 1937–39	*Average 1947–49*	*1950*	*1951*	*1952* [a]
	(1947–49 = 100)	*(millions of dollars at 1948 prices)*		(1947–49 = 100)	
TOTAL	*70.7*	*1,223.5*	*113.5*	*171.3*	*158.7*
Capital goods..................	*84.6*	*428.2*	*114.5*	*185.0*	*144.2*
Foodstuffs..................	82.8	243.5	135.7	185.0	149.9
Pharmaceutical products and toilet articles.............	72.0	23.2	209.5	406.5	267.7
Domestic appliances..........	37.3	50.2	83.1	158.6	115.9
Motor vehicles..............	34.9	52.6	55.5	191.2	129.1
Raw materials.................	*94.9*	*150.5*	*126.4*	*193.5*	*130.3*
Yarns......................	101.8	15.9	87.4	250.3	36.5
Paper......................	64.8	33.0	138.8	171.5	141.2
Chemical products...........	77.4	56.3	150.4	227.0	148.3
Metals.....................	117.2	24.5	107.7	119.6	134.7
Fuels........................	*59.5*	*146.8*	*127.7*	*168.4*	*179.8*
Capital goods..................	*54.7*	*498.0*	*104.6*	*153.6*	*173.4*
Building materials...........	55.3	36.7	94.5	148.5	137.6
Other materials.............	78.1	86.9	108.6	125.4	113.9
Agricultural machinery and equipment...............	74.1	14.7	208.2	128.6	171.4
Transport and communications.	48.5	171.3	83.5	149.2	198.3
Industrial and miscellaneous...	47.9	188.4	115.8	173.5	185.4

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] Provisional estimates.

few years—reaching a peak in 1951—these supplies were more than adequate. The remarkable volume of these imports can be largely ascribed to stock-piling as a security measure against an unfavourable turn in international affairs. The expansion of yarn imports (over 50 per cent of which were wool) was particularly oustanding, as was that of paper (principally newsprint) and chemical products. This last item increased 127 per cent in relation to the 1947-49 average. Metal imports, which are especially important to Brazil, rose proportionately less (19.6 per cent), in view of the continuous increase in domestic iron and steel production.

Fuels and lubricants follow the same trend as raw materials, rising in 1951-52 by approximately 70 per cent in relation to 1947-49 values. This figure gives some indication of the extent and intensity of demand for these goods. It should be noted that more than 80 per cent of these imports represent petroleum and its by-products.

The increase of the gross product and the suspension of restrictions enabled the quantum of imports of certain consumer goods, many of which are essential to Brazil, to reach hitherto unrecorded levels in 1951. An increase of 85 per cent, in relation to the average for 1947-49, was noted in the volume of foodstuffs, more than 70 per cent of which consisted of wheat. Imports of pharmaceutical products (in which antibiotics figure at the top of the list) likewise rose exceptionally—306.5 per cent as compared with 1947-49—with a view to larger reserves of stocks.

Items of a less essential nature, such as motor vehicles and domestic appliances, particularly electrical goods, also increased substantially. The number of passenger cars imported in 1951 was the highest on record.

In view of these facts, and despite the reduction in the quantum of total imports for 1952 referred to above, Brazilian imports in general have unquestionably enabled domestic consumption to be fully covered and have contributed both to the country's economic development and to investments. For this purpose, it was sufficient to impose certain restrictions on a number of non-essential goods, imports of which had expanded remarkably during 1951 and the first half of 1952. On the other hand, had the forces, which in 1952 led to the contraction of imports, still prevailed in 1953, supply difficulties would undoubtedly have occurred.

(d) *Chile*

In 1952, favourable terms of trade and a greater capacity for external payments enabled Chile once more to raise the quantum of imports, the level being 6.7 above that for the preceding year. During the past five-year period, the structure of imports remained fairly stable, but there was some increase in the share of consumer goods during 1952, thus affecting the relative position of other classes of goods.

By 1951, the different groups of imports generally consisted of essential goods. Their increased volume in that year showed a marked resistance against any attempt to alter the proportion of individual groups in relation to the total. Indeed, the main changes in the structure of imports had already taken place in Chile prior to the period 1947-49. From 1937-39 onward, there was an active substitution of consumer goods, which substantially reduced imports of this category, both in absolute terms and proportionately, to total imports. Simultaneously, imports of capital goods and their proportion to the total rose from 25.1 per cent in 1937-39 to 33.6 per cent in 1947-49. Hence, in 1952 and 1951 their share in total imports, as compared with 1947-49, did not vary greatly. Their volume, however, increased 15.2 per cent and 11.5 per cent respectively, as compared with 1947-49, principally due to greater import facilities. However, only three items in the group of capital goods in 1951 showed increases of any importance: agricultural machinery and equipment (22.2 per cent); industrial equipment (35.1 per cent), and mining equipment (50 per cent). (See table 94.) For several outstanding items, such as building and other materials, contractions took place. It should nevertheless be recalled that, in 1951 and 1952, Chile developed its cement and steel industries rapidly, partly with a view to the export market.

Chile must perforce retain a minimum volume of raw materials imports which cannot be decreased further and which in 1952 and 1951, in fact, showed an increase of 9.8 and 7.4 per cent, respectively, as compared with the 1947-49 average. The five principal items under raw materials, representing more than 90 per cent of the total, together emphasize the impossibility of any large-scale substitution in the present stage of industrialization. These items are: textile fibres, particularly cotton; the yarn required to produce certain types of textiles; chemical products, ranging from acids and alkalis to dyes and paints; metals, made up especially of ingots, rolled products and certain processed forms of tin, lead, antimony, nickel, etc.; and lastly newsprint.

Despite a beginning to domestic output, fuels (petroleum and its by-products) must likewise inevitably be provided by imports unless domestic demand is to remain unsatisfied. The volume of fuel imports was equivalent to 11.9 and 14.5 per cent of total imports in 1952 and 1951,

Table 93. Chile: Quantum of imports, by groups

	Average 1937–39	*Average 1947–49*	*1950*	*1951*	*1952*	*Average 1937–39*	*Average 1947–49*	*1950*	*1951*	*1952*
	(millions of dollars at 1948 prices)					*(percentage of the total)*				
TOTAL	*248.4*	*286.3*	*275.4*	*316.6*	*337.7*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Consumer goods	109.5	93.1	83.5	97.5	122.9	44.1	32.5	30.3	30.8	36.4
Raw materials	54.4	58.1	64.2	65.9	63.8	21.9	20.3	23.3	20.8	18.9
Fuels	22.1	38.9	29.7	45.9	40.2	8.9	13.6	10.8	14.5	11.9
Capital goods	62.4	96.2	98.0	107.3	110.8	25.1	33.6	35.6	33.9	32.8

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] Provisional estimates.

Table 94. Chile: Quantum of selected imports

	Average 1937–39 (*1947–49 = 100*)	*Average 1947–49 (millions of dollars at 1948 prices)*	*1950*	*1951*	*1952*
			(*1947–49 = 100*)		
TOTAL	*86.8*	*286.3*	*96.2*	*110.6*	*118.0*
Consumer goods	*117.4*	*93.1*	*89.7*	*104.7*	*132.0*
Foodstuffs	88.8	53.7	105.6	112.1	164.1
Textiles	178.1	17.4	61.5	151.1	46.6
Pharmaceutical goods and toilet articles	200.0	2.1	133.3	152.4	81.0
Rubber manufactures	131.8	2.2	63.6	86.4	136.4
Domestic appliances	106.3	3.2	68.7	146.9	137.5
Motor vehicles	84.7	7.2	19.4	131.9	79.2
Raw materials	*93.9*	*58.1*	*110.5*	*113.4*	*109.8*
Paper	76.3	9.3	109.7	91.4	102.1
Textiles	51.1	14.2	143.7	93.7	143.0
Yarns	218.9	7.4	52.7	85.1	59.5
Chemical products	80.2	16.7	116.8	170.6	109.0
Metals	96.0	5.6	89.3	73.2	66.1
Fuels	*56.8*	*38.9*	*76.3*	*118.0*	*103.3*
Capital goods	*64.9*	*96.2*	*101.9*	*111.5*	*115.2*
Building materials	76.9	7.8	130.8	84.6	103.8
Other materials	79.6	30.9	89.0	94.2	89.6
Agricultural machinery and equipment	57.4	5.4	51.8	122.2	105.5
Transport and communications	58.5	17.1	62.6	100.0	110.5
Industrial and miscellaneous	52.6	30.8	135.7	135.1	145.1
Mining	57.6	4.2	119.0	150.0	135.7

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

spectively, and their growing tendency is shown by the ct that they were 3.3 and 18 per cent higher than e corresponding levels in 1947-49.

Consumer goods, in turn, increased 32 per cent in 52, after showing an improvement of 7.7 per cent in 51. Broadly speaking, this implies that the decline in ricultural production during the past few years had gely to be compensated by imported foodstuffs, the lume of which in 1952 and 1951 increased by 64.1 and .1 per cent respectively. By 1951, there already apared to be little possibility of replacing these goods by mestic production. Moreover, in view of their composin, there was little margin for the substitution of certain ms contained in this group. Two of these, namely, foodffs and motor vehicles, represented 65 per cent of such ports. In both cases, the general supply was not very undant; 85 per cent of all foodstuff imports consisted sugar, coffee, tea, beef, and in recent years wheat also. ly in the case of domestic appliances—principally ctrical apparatus, which increased 46.9 per cent in 51 after the small amount imported in 1950—were ports somewhat restricted in 1952, although they still nained above the 1947-49 average, exceeding it by 37.5 r cent.

(e) *Colombia*

In 1952, the quantum of Colombia's imports remained the same level as in 1951. There were few structural anges during the period under review. Capital and nsumer goods both retained practically the same proporn to the total as prevailed in 1947-49. (See table 95.) Imports of consumer goods in 1951 reveal certain fairly portant increases, particularly in relation to essential goods, such as domestic electrical and metal appliances (54.4 per cent). (See table 96.) As may be seen from the foreign exchange regulations, these commodities and motor vehicles could be kept at a lower level, if necessary. On the other hand, a similar reduction would not be feasible for other consumer goods of a more essential nature, nor does it appear possible, at present, to replace the latter by domestic production, in view of the present productive structure of the country. For instance, among the imports of foodstuffs, which rose 32.5 per cent in relation to the 1947-49 level, wheat, flour and cocoa account for almost two-fifths. A contraction of 31.7 per cent occurred in rubber manufacturers; this group is composed principally of tyres and tubes for motor vehicles, imports of which must continue, since two factories operating in Colombia are, as yet, unable to meet domestic consumption fully. Domestic production has substituted a fair proportion of the pharmaceutical products which were formerly imported, consisting mainly of specialities such as antibiotics, etc. Such imports of essential consumer goods have prevented any substantial changes in the composition of purchases from abroad.

On the other hand, Colombia has found it necessary to import increasing amounts of raw materials in order to meet economic development requirements and, to a certain extent, for the production of goods which were formerly imported and which are now being gradually substituted by domestic industries. This applies to textile fibres (yarns, wool and artificial silk, and of chemicals (dyes, sodium hydrates, acids, etc.), the figures for which, in 1951, had risen in relation to the average for 1947-49. Similarly, increases were observed in imports of industrial

Table 95. Colombia: Quantum of imports, by groups

	Average 1947–49	1950	1951	Average 1947–49	1950	1951
	(millions of dollars at 1948 prices)			(percentage of the total)		
TOTAL	*341.6*	*415.3*	*355.2*	*100.0*	*100.0*	*100.0*
Consumer goods	102.8	137.9	109.8	30.1	33.2	30.9
Raw materials	79.6	105.1	85.6	23.3	25.3	24.1
Fuels	9.6	9.1	13.8	2.8	2.2	3.9
Capital goods	149.6	163.2	146.0	43.8	39.3	41.1

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

fats and oils. Textile fibres and paper, in contrast, show reductions.

Imports of fuels and lubricants were of little importance (3.9 per cent of the total), since Colombia produces petroleum. Only special by-products of petroleum are imported which the Colombian refineries are not as yet able to manufacture.

Table 96. Colombia: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	1950	1951
		(1947–49=100)	
TOTAL	*341.6*	*121.6*	*104.0*
Consumer goods	*102.8*	*134.1*	*106.8*
Foodstuffs	31.1	140.2	132.5
Textiles	20.2	76.2	59.9
Pharmaceutical goods and toilet articles	13.3	130.8	109.8
Rubber manufactures	4.1	80.5	68.3
Domestic appliances	14.7	189.1	154.4
Motor vehicles	7.9	173.4	54.4
Raw materials	*79.6*	*132.0*	*107.5*
Textile fibres	16.7	131.7	80.8
Yarns	16.8	131.0	106.0
Chemical products	16.4	136.0	114.6
Inedible oils and fats	7.9	158.2	188.6
Paper	12.6	118.2	96.0
Fuels	*9.6*	*94.8*	*143.8*
Capital goods	*149.6*	*109.1*	*97.6*
Building materials	24.9	111.6	91.2
Other materials	14.7	124.5	101.4
Agricultural machinery and equipment	13.0	156.2	98.5
Transport and communications	25.6	137.9	112.5
Industrial and miscellaneous	71.4	86.1	93.6

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

Thus, it is not surprising that in the distribution of imports by groups, capital goods have not increased their relative importance. However, in view of the volume of total imports, and of their level in 1950, there is an ample supply of such goods for purposes of domestic investment. Examining the 1951 figures, as compared with the 1947-49 average, it will be seen that there was an improvement in other materials (1.4 per cent) and in transport and communications equipment (12.5 per cent). On the other hand, decreases of 8.8 per cent occurred in imports of building materials, 6.4 per cent in industrial and miscellaneous goods and 1.5 per cent in agricultural machinery and equipment.

(f) *Cuba*

The partial statistics available indicate that the quantum of Cuban imports remained high in 1952, and 31 per cent higher than the average for 1947-49. However, no important changes took place in their composition. With slight variations, both in 1951 and in 1952, each group retained approximately the same proportion to the total as those prevailing in 1947-49.

In contrast to the position of other Latin-American countries, Cuba is not faced with the problem of a weak capacity to import, which would prevent structural changes from being made in imports. On the contrary, its capacity to import is among the highest in the region, the quantum of its total imports being fourth in order of importance after Argentina, Brazil and Mexico. In terms of per capita imports, Cuba takes second place after Venezuela.

The general picture of Cuban foreign purchases shows little sign of active substitution of imports by domestic production, or of the possibility of restrictions on imports of consumer goods. In 1951 and 1952, these latter, as a whole, had risen above their levels for the 1947-49. This is particularly true of the high percentage of consumer

Table 97. Cuba: Quantum of imports, by groups [a]

	Average 1947–49	1950	1951	1952[b]	Average 1947–49	1950	1951	1952
	(millions of dollars at 1948 prices)				(percentage of the total)			
TOTAL	*564.5*	*662.2*	*739.5*	*679.3*	*100.0*	*100.0*	*100.0*	*100.0*
Consumer goods	360.7	425.1	459.2	401.5	63.9	64.2	62.1	59.1
Raw materials	75.6	100.0	109.5	104.6	13.4	15.1	14.8	15.4
Fuels	41.8	48.4	54.7	61.1	7.4	7.3	7.4	9.0
Capital goods	86.4	88.7	116.1	112.1	15.3	13.4	15.7	16.5

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] The f.o.b. figures shown in official statistics have been transformed into c.i.f. values by using the weighting factors published in *International Financial Statistics*, of the International Monetary Fund.

[b] Estimated on the basis of provisional data.

goods in relation to total Cuban imports (62.1 per cent in 1951 and 59.1 per cent in 1952) including a high proportion of non-essential goods, such as motor vehicles and domestic appliances. The most important item among the consumer goods imported by Cuba consists of food products, of which three alone—wheat-flour, rice and lard—together, combine to equal 60 per cent of the group. Within the list of foodstuffs figure certain products and beverages which are very definitely luxury goods.

Among the principal raw materials which Cuba imports for its economic growth, the most important are chemicals (acids, dyes and salts principally), yarns (rayon, spunwool yarns and threads), newsprint and woodpulp, and metals (tinplate and iron manufactures, etc.). In 1951 and 1952, a substantial expansion took place in all these commodities, indicating the abundant supplies available for domestic economic activities during those years. Imports of fuels and lubricants also rose during 1951 and 1952, particularly in the latter year, accounting for 7.4 and 9 per cent, respectively, of all imports. Petroleum and its by-products constituted the major part of these items.

Table 98. Cuba: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*	*1952*[a]
		(1947–49 = 100)		
TOTAL	*564.5*	*117.3*	*131.0*	*120.3*
Consumer goods	*360.7*	*117.9*	*127.3*	*111.3*
Foodstuffs	199.8	116.0	127.7	102.4
Textiles and clothing	71.1	121.9	110.3	114.6
Motor vehicles	18.6	131.7	174.7	142.5
Domestic appliances	26.0	114.6	125.0	125.4
Raw materials	*75.6*	*132.3*	*144.8*	*138.4*
Yarns	10.2	110.8	115.7	100.0
Newsprint and woodpulp	10.2	143.1	145.1	133.3
Chemicals	17.5	147.4	181.7	178.3
Metals	5.6	117.9	105.4	108.9
Fuels	*41.8*	*115.8*	*130.9*	*146.2*
Capital goods	*86.4*	*102.7*	*134.4*	*129.7*
Building materials	8.5	140.0	200.0	143.5
Other materials	19.2	103.6	107.8	88.5
Agricultural machinery and equipment	7.3	127.4	182.2	130.1
Transport and communications	19.8	93.4	115.7	113.1
Industrial and miscellaneous	31.6	92.1	133.5	161.4

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] Preliminary figures.

In contrast with the high proportion of consumer goods to total imports, in 1951 and 1952 capital goods only accounted for 15.7 and 16.5 per cent respectively, one of the lowest proportions in Latin America. The total volume of capital goods grew more than 34.4 and 29.7 per cent, respectively, in 1951 and 1952 above the 1947-49 average, the greatest increase taking place in building materials in 1951 and in capital goods for industrial and other purposes in 1952.

(g) *Dominican Republic*

The quantum of imports during 1952 fell somewhat below the level for 1951, thus interrupting the rising tendency observed throughout the latter year, which was in sharp contrast with the low figures registered for 1950. In 1951, total imports were 12.8 per cent above those for the period 1947-49, the improvement being principally due to consumer goods and raw materials, while capital goods showed a reduction of 16.4 per cent.

The growth in the absolute values of a consumer goods was mainly determined by the increases recorded in food-

Table 100. Dominican Republic: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*
		(1947–49 = 100)	
TOTAL	*64.0*	*90.8*	*112.8*
Consumer goods	*33.6*	*94.9*	*121.4*
Foodstuffs	9.7	90.7	134.0
Textiles and clothing	15.5	101.3	114.8
Motor vehicles	2.1	100.0	100.0
Domestic appliances	3.0	66.7	90.0
Raw materials	*6.9*	*114.5*	*152.2*
Paper	2.0	100.0	65.0
Chemical products	3.0	130.0	206.7
Fuels	*4.0*	*95.0*	*115.0*
Capital goods	*19.5*	*74.4*	*83.6*
Building materials	5.1	58.8	58.8
Other materials	2.1	114.3	133.3
Agricultural machinery and equipment	0.8	62.5	137.5
Transport and communications	4.9	67.3	89.8
Industrial and miscellaneous	6.6	80.3	75.8

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

Table 99. Dominican Republic: Quantum of imports, by groups [a]

	Average 1947–49	*1950*	*1951*	*Average 1947–49*	*1950*	*1951*
	(millions of dollars at 1948 prices)			*(percentage of the total)*		
TOTAL	*64.0*	*58.1*	*72.2*	*100.0*	*100.0*	*100.0*
Consumer goods	33.6	31.9	40.8	52.5	54.9	56.5
Raw materials	6.9	7.9	10.5	10.8	13.6	14.5
Fuels	4.0	3.8	4.6	6.3	6.5	6.4
Capital goods	19.5	14.5	16.3	30.4	25.0	22.6

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] The f.o.b. figures indicated in official statistics were transformed into c.i.f. prices by using the weighting factors published in *International Financial Statistics*, of the International Monetary Fund.

Table 101. Ecuador: Quantum of imports, by groups

	Average 1947–49	1950	1951	Average 1947–49	1950	1951
	(millions of dollars at 1948 prices)			(percentage of the total)		
TOTAL	*57.3*	*61.6*	*69.6*	*100.0*	*100.0*	*100.0*
Consumer goods	24.2	26.4	33.6	42.3	42.8	48.2
Raw materials	7.3	7.5	9.8	12.7	12.1	14.1
Fuels	1.1	1.3	1.3	1.9	2.1	1.9
Capital goods	24.7	26.4	24.9	43.1	43.0	35.8

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

stuffs (34 per cent) and textiles and clothing (14.8 per cent). Imports of motor vehicles in 1950 and 1951 were the same as during 1947-49, whereas domestic appliances were lower than during this period (see table 100).

Due to the fact that there is little diversification in the economy of the Dominican Republic, in 1951, two items only combined to absorb more than 70 per cent of all raw materials imports. These were firstly, paper and cardboard and secondly, chemical products. The value of paper and cardboard imports was a little less than two-thirds of that for 1947-49, while chemical products almost doubled, thus accounting for most of the expansion in raw materials as a whole.

Petroleum by-products, which represent the entire imports of fuels and lubricants, showed an increase of 15 per cent. Among capital goods there was a decrease in imports of building materials, transport equipment and goods for industrial and other purposes. In contrast, other materials, principally made up of wire and galvanized iron sheets, rose by 33.3 per cent, and agricultural machinery and equipment increased by 37.5 per cent.

(h) *Ecuador*

The rising quantum of imports into Ecuador, observed until 1951, was reversed in 1952. In 1951, a remarkable expansion in the volume of imports raised the level 21.5 per cent higher than the already substantial average for the period 1947-49. However, the appreciable increase of foodstuffs, motor vehicles and domestic appliances in 1951 reduced the ratio of capital goods to total imports, simultaneously raising that of consumer goods. (See table 101.)

Of the three groups of consumer goods to which reference was made, essential foodstuffs increased by 44.4 per cent (see table 102). About 50 per cent of these consisted of wheat and wheat-flour. Though less essential imports of motor vehicles and domestic appliances figure second in the list of the increases observed during 1951 (87.5 per cent and 87.1 per cent respectively). While exporting a quantity of pharmaceutical products, Ecuador was nevertheless obliged to import certain specialties, which, together with toilet articles, accounted for 3.7 per cent of the total. Lastly, imports of textiles and ready-made clothing rose 6.2 per cent in 1951, as compared with 1947-49.

Ecuador has found it necessary to employ a fair proportion of its capacity to import for raw materials (14.8 per cent), consisting mainly of yarns, chemical products and paper, especially newsprint. The remarkable expansion of yarn imports in 1951 was the result of an increase in rayon and to a lesser extent of cotton yarn imports. Notwithstanding the fact that Ecuador produces cotton, the appreciable level of domestic costs, in 1951, as compared with import prices, led to higher imports of these goods.

The position of fuels differs entirely. Ecuador imported only certain petroleum by-products, representing 1.9 per cent of its total imports.

Capital goods have not developed in proportion with the volume of total imports, despite the country's substantial need for them. Although transport equipment is highly essential in Ecuador, imports of these commodities decreased 11.3 per cent in 1951, as compared with 1947-49, following the downward trend which began in 1950.

Table 102. Ecuador: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	1950	1951
		(1947–49 = 100)	
TOTAL	*57.3*	*107.5*	*121.5*
Consumer goods	*24.2*	*109.1*	*138.8*
Foodstuffs	9.0	103.3	144.4
Textiles and clothing	6.5	101.5	106.2
Pharmaceutical goods and toilet articles	3.0	123.3	86.7
Domestic appliances	3.1	116.1	187.1
Motor vehicles	0.8	75.0	187.5
Raw materials	*7.3*	*102.7*	*134.2*
Yarns	1.6	118.7	200.0
Paper	1.3	130.8	115.4
Chemical products	1.5	113.3	173.3
Fuels	*1.1*	*118.2*	*118.2*
Capital goods	*24.7*	*116.9*	*100.8*
Building materials	2.9	149.4	137.9
Other materials	1.7	129.5	129.5
Agricultural machinery and equipment	2.2	113.6	113.6
Transport and communications	7.1	93.0	88.7
Industrial and miscellaneous	10.8	92.6	92.6

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

(i) *Haiti*

In 1951, the volume of Haiti's imports was 56.3 per cent higher than during the period 1947-49. The proportion of consumer goods to the total was 64.2 per cent since the need for certain foodstuffs is basic. (See table 103.)

Imports of wheat-flour, wheat, lard and prepared milks, in addition to other articles, were of such importance that foodstuffs accounted for almost 50 per cent of consumer

Table 103. Haiti: Quantum of imports, by groups

	Average 1947–49	*1950*	*1951*	*Average 1947–49*	*1950*	*1951*
	(millions of dollars at 1948 prices)			*(percentage of the total)*		
TOTAL	*31.6*	*44.4*	*49.4*	*100.0*	*100.0*	*100.0*
Consumer goods	20.9	30.9	31.8	66.0	69.7	64.2
Raw materials	2.1	3.5	4.3	6.6	7.8	8.8
Fuels	1.4	2.0	2.2	4.7	4.5	4.5
Capital goods	7.2	8.0	11.1	22.7	18.0	22.5

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

goods in 1951. Textiles and ready-made clothing are equally essential and will remain so until domestic industry can be expanded adequately. There was a decrease of these goods in 1951 but their ratio to total imports still remained 20.4 per cent higher than in 1947-49. Exceptional increases were likewise observed in connexion with motor vehicles and domestic appliances: 100 per cent in both cases. (See table 104.)

The volume of imported raw materials was quite small (only 8.8 per cent of the total) and were practically limited to yarn and chemical products, both of which showed a marked increase in 1950 and 1951. The proportion of fuels (petroleum and by-products) decreased in comparison with total imports, although their volume in 1951 was considerably larger.

Capital goods as a whole rose 54.2 per cent in relation to 1947-49. Expansion took place in all the main items, particularly in transport and communications equipment (76.5 per cent), and miscellaneous materials (116.7 per cent).

Table 104. Haiti: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*
		(1947–49 = 100)	
TOTAL	*31.6*	*140.5*	*156.3*
Consumer goods	*20.9*	*147.8*	*152.2*
Foodstuffs	8.4	139.3	160.7
Textiles and clothing	8.8	152.3	120.4
Motor vehicles	0.8	125.0	200.0
Domestic appliances	0.6	150.0	200.0
Raw materials	*2.1*	*166.7*	*204.8*
Yarns	0.8	175.0	212.5
Chemical products	1.0	120.0	180.0
Fuels	*1.4*	*142.8*	*157.1*
Capital goods	*7.2*	*111.1*	*154.2*
Building materials	1.2	108.3	141.7
Other materials	0.6	133.3	216.7
Agricultural machinery and equipment	1.0	140.0	170.0
Transport and communications	1.7	105.9	176.5
Industrial and miscellaneous	2.7	100.0	125.9

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

(j) *Mexico*

After climbing to an unprecedented level in 1951—32.9 per cent higher than the 1947-49 average—Mexican imports in 1952 (both consumer and capital goods) declined by 2.8 per cent. (See tables 105 and 106.) During 1951, for reasons similar to those in other Latin-American countries, that is, in view of a possible shortage of certain articles and an increase in monetary reserves in 1950, the quantitative restrictions placed on imports were gradually relaxed, although the tariffs on non-essential goods were raised. In 1952, no alteration occurred in government policy, yet monetary reserves and the gross national product were not as favourable to the continued expansion of imports. With the exceptions of fuel, certain raw materials and foodstuffs, demand for the majority of the remaining imports was lower.

Broadly speaking, the composition of imports, by groups, has witnessed few modifications since 1947-49. (See table 105.) Consumer goods absorb from 28 to 30 per cent of the total; raw materials and fuel account for 18 to 23 per cent while 48 to 51 per cent consists of capital goods. The latter group provides the most striking contrast in Mexican imports, no other country in the region attaining a similar proportion for this category. Comparison with the period 1937-39 emphasizes a marked difference. At that time capital goods comprised 38 per cent of the quantum of imports while consumer goods represented 32 per cent and raw materials 27 per cent of the total.

Until 1951, an appreciable expansion was observed in all capital goods, representing an average improvement of 34 per cent as compared with 1947-49. The main increases noted were those in equipment for transport and communications. (See table 106.) However, in absolute terms, the most important items were capital goods for industrial purposes, mining, etc., which together account for practically 43 per cent of the imports in this group. In 1952, industrial and mining equipment declined somewhat and imports of agricultural equipment and building materials contracted even more. Transport equipment continued at the same high level as had prevailed the year before (54 per cent above the 1947-49 figure). Nevertheless, in all items, the volume was found to be several times higher than in the pre-war period.

Raw material imports in the aggregate rose 13.8 per cent in 1951 over their 1950 figure, there being a further increase in 1952. In the case of textile fibres and yarn, however, the same tendency did not prevail; in 1951 the former stood slightly below their 1947-49 level decreasing still further in 1952, while the latter declined by 62.3 and 72.7 per cent in 1951, and 1952. The contraction in greasy, washed and combed wool imports was largely the result of import restrictions adopted in view of substantial stocks accumulated in 1950. On the other hand, the 40 per cent reduction in artificial silk imports was mainly due to increased domestic production. Certain metals, raw rubber and chemical products, rose more than 40

Table 105. Mexico: Quantum of imports, by groups

	Average 1937–39	*Average 1947–49*	*1950*	*1951*	*1952*[a]	*Average 1937–39*	*Average 1947–49*	*1950*	*1951*	*1952*[a]
	(millions of dollars at 1948 prices)					*(percentage of the total)*				
TOTAL	*262.2*	*548.2*	*538.9*	*728.3*	*708.5*	*100.0*	*100.0*	*100.0*	*100.0*	*100.0*
Consumer goods	84.2	158.4	152.0	220.0	215.4	32.1	28.9	28.2	30.2	30.4
Raw materials	72.1	89.9	102.4	116.5	122.6	27.5	16.4	19.0	16.0	17.3
Fuels	5.9	20.8	21.5	18.2	27.6	2.2	3.8	4.0	2.5	3.9
Capital goods	100.0	279.1	263.0	373.6	342.9	38.2	50.9	48.8	51.3	48.4

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.
[a] Provisional data.

per cent above their 1947-49 average, although in 1952 there was a reduction in all of these.

Mexico still needs to import considerable quantities of consumer goods, particularly foodstuffs. The sharp increase of these products in 1951, as compared with 1947-49 (78.9 per cent), and the additional rise in 1952, were largely due to abnormal imports of maize, which had practically disappeared between 1947 and 1950. The continuous expansion of wheat imports also affected this trend, since domestic production of this grain was inadequate to meet consumption. The volume of imports of textiles and ready-made clothing was lower in 1951 than in 1947-49, owing to the development of domestic production which gradually replaced imports. In 1952, textiles fell by 48.2 per cent of their post-war volume, thus returning to the pre-war level. Similarly, domestic appliances fell by 22.7 per cent as a result of import restrictions. The increase in the number of motor vehicles imported in 1951—36.5 per cent over 1947-49 and 79 per cent over 1950—originated in the suspension of restrictions on direct imports and also on imports of material for the assembly plants established in Mexico. This rate dropped appreciably in 1952 and by the beginning of 1953 new restrictions were imposed on production in these assembly plants.

The trend of events during the past few years suggests that the structure of Mexican imports was readily adapted to a policy of economic development, and that the maximum has probably been reached in this direction. On the other hand, in view of the need for imports of certain foodstuffs to supplement domestic production and growing demand for raw materials, it is likely that the proportion of these groups to the aggregate volume of imports will not decrease to any great extent.

(k) *Peru*

Although the partial data for Peruvian imports in 1952 were insufficient to enable any definite conclusions to be drawn as to their quantum, their level was somewhat below 1951. The heavy volume of imports in 1951, the small favourable balance of payments and the trend of exports, all lead to this statement. In addition to the remarkable

Table 106. Mexico: Quantum of selected imports

	Average 1937–39	*Average 1947–49 (millions of dollars at 1948 prices)*	*1950*	*1951*	*1952*
	(1947–49 = 100)		*(1947–49 = 100)*		
TOTAL	*47.8*	*548.2*	*98.3*	*132.9*	*129.2*
Consumer goods	*53.0*	*158.4*	*96.0*	*138.9*	*136.0*
Foodstuffs	43.2	57.0	124.7	178.9	210.0
Textiles and clothing	56.9	16.4	39.6	79.9	51.8
Pharmaceutical goods and toilet articles	40.1	14.8	127.7	187.2	177.0
Motor vehicles	55.6	21.9	76.3	136.5	113.2
Domestic appliances	68.1	11.0	78.2	106.4	77.3
Raw materials	*80.4*	*89.9*	*113.9*	*129.6*	*136.4*
Textile fibres	83.2	10.4	129.8	98.1	88.5
Yarns	97.3	7.7	63.6	37.7	27.3
Woodpulp	101.4	6.6	163.6	154.5	150.0
Chemical products	50.3	32.9	131.0	146.2	120.7
Metals	87.9	3.3	97.0	154.5	130.3
Rubber	38.7	6.0	98.3	158.3	130.0
Fuels and lubricants	*28.6*	*20.8*	*103.4*	*87.5*	*132.7*
Capital goods	*35.8*	*279.1*	*94.2*	*133.9*	*122.9*
Building materials	66.5	18.6	121.5	148.9	95.2
Other materials	44.9	44.4	93.5	127.9	124.5
Agricultural machinery and equipment	29.4	17.5	111.4	166.3	117.1
Transport and communications	34.5	64.7	86.6	155.3	54.4
Industrial and miscellaneous	29.9	133.9	92.2	119.1	111.6

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

Table 107. Peru: Quantum of imports, by groups

	Average 1947–49	1950	1951	Average 1947–49	1950	1951
	(millions of dollars at 1948 prices)			(percentage of the total)		
TOTAL	*190.6*	*248.9*	*326.5*	*100.0*	*100.0*	*100.0*
Consumer goods	90.7	134.4	156.7	47.6	54.0	48.0
Raw materials	30.1	36.6	43.8	15.8	14.7	13.4
Fuels	4.0	5.2	1.3	2.1	2.1	0.4
Capital goods	65.8	72.7	124.7	34.5	29.2	38.2

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

quantum of imports (71.3 above 1947-49), the composition of imports was such as to ensure that the contraction in 1952 would have the least possible influence in the domestic sphere limiting the effects to a slackening in the volume of certain types of goods. Consumer goods particularly, which in 1951 made up 48 per cent of total imports, showed an increase of 72.8 per cent over their 1947-49 level. Similarly, although all the items in this group show substantial increases, the most important were those of textiles (53.1 per cent), motor vehicles (313.2 per cent) and domestic appliances (195.1 per cent). (See tables 107 and 108.)

Raw materials which, together, amount to 13.4 per cent of total imports, likewise increased in 1951 as compared with 1947-49 (45.5 per cent). In all the items in this group, an upward trend was observed although the most outstanding were metals and paper, which rose 136.4 per cent and 54.5 per cent respectively.

On the other hand, fuels, which are a minor item in Peruvian imports, consisting mainly of special petroleum by-products, such as aviation petrol and lubricants, decreased in 1951, in contrast with the preceding year.

Table 108. Peru: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	1950	1951
		(1947–49 = 100)	
TOTAL	*190.6*	*130.6*	*171.3*
Consumer goods	*90.7*	*148.2*	*172.8*
Foodstuffs	56.2	161.7	150.5
Textiles and clothing	14.5	95.9	153.1
Medicinal products and toilet articles	3.8	131.6	136.8
Domestic appliances	6.1	188.5	295.1
Motor vehicles	3.8	123.7	413.2
Raw materials	*30.1*	*121.6*	*145.5*
Yarns	3.8	131.6	136.8
Paper	5.5	130.9	154.5
Chemical products	12.2	109.8	147.5
Metals	1.1	154.5	236.4
Fuels	*4.0*	*130.0*	*32.5*
Capital goods	*65.8*	*110.5*	*189.5*
Building materials	4.2	107.1	216.6
Other materials	10.5	108.6	221.0
Agricultural machinery and equipment	8.2	100.0	111.0
Transport and communications	16.8	157.1	272.0
Industrial and miscellaneous	26.1	85.1	144.1

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

Despite the sharply rising trend of consumer and raw materials imports, the most substantial changes took place in imports of capital goods, the quantum of which in 1951 increased by the remarkable figure of 89.5 per cent in relation to 1947-49. This meant that the ratio of these goods to total imports amounted to roughly 38.2 per cent, as compared with 29.2 per cent and 34.5 per cent in 1950 and 1947-49 respectively. Attention is drawn to building materials by reason of their marked expansion, together with that of other materials and transport equipment, particularly motor vehicles. Imports of industrial and mining equipment and of agricultural machinery and equipment likewise rose.

Peru made use of the substantial volume of goods imported in 1951 to promote investment, despite the appreciable figures for consumer goods.

(1) *Uruguay*

As in other Latin-American countries, the restrictive measures adopted by the government to regulate foreign trade caused a contraction of 31.9 per cent in imports during 1952. This position is in striking contrast with 1951, when the quantum rose by some 64 per cent as compared with the average for 1947-49. (See table 109.)

In 1951 and 1952, important changes took place in the composition of imports established in earlier periods. (See table 109.) The proportion of capital goods to total imports increased (31.4 per cent in 1947-49, and 44.3 and 41.4 per cent in 1951 and 1952), but there was little variation in the proportions of raw materials and fuels. However, a sharp contraction was observed in imports of consumer goods (36.7 per cent in 1947-49 and 26.8 and 25.3 per cent in 1951 and 1952). In view of the substantial volume of all imports until 1951, these structural modifications were not affected by a reduction in the volume of consumer goods, but rather by a more intensive expansion of capital goods. The quantum of raw materials, fuels and consumer goods increased by 44.2 per cent, 58.3 per cent and 19.6 per cent respectively as compared with 1947-49.

Apart from the trend for other classes of goods, and with the exception of foodstuffs, imports of consumer goods in 1951 were higher than for the period 1947-49. This will be observed in the case of pharmaceutical products and toilet articles (227.3 per cent), motor vehicles (63.3 per cent), domestic appliances (145.9 per cent) and several other non-essential goods (118.5 per cent). (See table 110.) The contraction in imports of foodstuffs, beverages and tobacco—half of which consisted of sugar, coffee and tobacco—was caused by abnormally high imports of wheat and cattle from Argentina in 1947. If these exceptional purchases abroad are excluded, it will be seen

Table 109. Uruguay: Quantum of imports, by groups

	Average 1947–49	*1950*	*1951*	*1952*[a]	*Average 1947–49*	*1950*	*1951*	*1952*[a]
	(millions of dollars at 1948 prices)				*(percentage of the total)*			
TOTAL	*206.2*	*247.6*	*337.8*	*230.0*	*100.0*	*100.0*	*100.0*	*100.0*
Consumer goods	75.7	78.0	90.5	58.2	36.7	31.5	26.8	25.3
Raw materials	46.6	53.7	67.2	46.5	22.6	21.7	19.9	20.2
Fuels and lubricants	19.2	14.6	30.4	30.1	9.3	5.9	9.0	13.1
Capital goods	64.7	101.3	149.7	95.2	31.4	40.9	44.3	41.4

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] Estimates.

that expansion was uniform in this sector also. On the other hand, during 1952 imports of motor vehicles were severely affected (31.7 per cent less than in 1951) by the restrictions mentioned above.

Table 110. Uruguay: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*	*1952*[a]
		(1947–49=100)		
TOTAL	*206.2*	*120.1*	*163.8*	*111.5*
Consumer goods	*75.7*	*105.1*	*119.6*	*76.9*
Foodstuffs	39.4	86.8	87.6	81.2
Pharmaceutical goods and toilet articles	3.3	248.5	327.3	166.7
Domestic appliances	3.7	127.0	245.9	129.7
Motor vehicles	6.0	148.3	163.3	68.3
Various unspecified goods	5.4	92.6	218.5	92.6
Raw materials	*46.6*	*115.2*	*144.2*	*99.8*
Yarns	6.6	116.7	184.8	53.0
Chemical products	7.4	117.6	150.0	121.6
Rubber	1.7	117.7	117.7	94.1
Wood	7.0	134.3	140.0	124.3
Metals	3.7	135.1	118.9	135.1
Fuels	*19.2*	*76.0*	*158.3*	*156.8*
Capital goods	*64.7*	*156.6*	*231.4*	*147.1*
Building materials	5.4	127.8	163.0	120.4
Other materials	14.0	134.3	161.4	102.1
Agricultural machinery and equipment	5.6	123.2	192.9	103.6
Transport and communications	11.5	125.2	313.9	258.3
Industrial and miscellaneous	28.2	192.6	253.2	137.9

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

The over-all supply of raw materials in 1951 was sufficient to meet the immediate requirements of economic activities and even to allow for stock-piling of certain products. This may be seen from the sharp increase in this group in 1951, as compared with 1947-49. For instance, yarn imports (principally rayon and cotton) rose 84.8 per cent, while chemicals improved by 50 per cent, (including alkalis, acids, mineral salts, dyes, paints, etc.); lumber and wood products, 40 per cent and metals 18.9 per cent.

The position is similar in relation to fuels, both for coal and petroleum and its by-products, which make up 87 per cent of this group.

The most interesting development, however, was that of the import quantum of capital goods, which rose in 1952 and 1951, 47.1 and 131.4 per cent above the 1947-49 level respectively, this being the most outstanding increase observed in any Latin-American country. Though all the items making up this group reveal sharp upward trends—with the exception of stud and draught animals, which account for a small proportion of the total—the most important expansions were those of agricultural machinery and equipment, transport and communications material and industrial and other equipment.

Uruguay may be considered to have made efficient use of the favourable conjunction of factors created by the large volume of imports which entered the country in 1951, applying them in a manner which enabled domestic activities and investment to develop unhampered.

(m) *Venezuela*

The high level of Venezuelan imports during 1952 was, in fact, 6.7 per cent above their 1951 quantum and slightly above their 1947-49 average. On the other hand, imports into that country in 1951 were 4.5 per cent below the aforesaid average. During the post-war period, imports

Table 111. Venezuela: Quantum of imports, by groups[a]

	Average 1947–49	*1950*	*1951*	*1952*[b]	*Average 1947–49*	*1950*	*1951*	*1952*[b]
	(millions of dollars at 1948 prices)				*(percentage of the total)*			
TOTAL	*755.8*	*669.1*	*721.7*	*767.8*	*100.0*	*100.0*	*100.0*	*100.0*
Consumer goods	312.9	335.9	326.9	331.7	41.4	50.2	45.3	43.2
Raw materials	44.6	62.3	67.8	64.5	5.9	9.3	9.4	8.4
Fuels	9.1	8.7	10.9	9.2	1.2	1.3	1.5	1.2
Capital goods	389.2	262.2	316.1	362.4	51.5	39.2	43.8	47.2

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] The f.o.b. figures indicated in official statistics were transformed into c.i.f. prices by using the weighting factors published in *International Financial Statistics*, of the International Monetary Fund.

[b] Provisional estimates.

Table 112. Venezuela: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*	*1952*[a]
		(1947–49=100)		
TOTAL	*755.8*	*88.5*	*95.5*	*101.6*
Consumer goods	*312.9*	*107.4*	*104.5*	*106.0*
Foodstuffs	126.2	128.8	125.2	122.9
Textiles and clothing	64.2	72.9	64.0	63.4
Medicinal products and toilet articles	28.0	95.7	110.7	101.4
Domestic appliances	37.0	97.6	103.5	114.1
Motor vehicles	21.9	119.2	121.9	133.3
Raw materials	*44.6*	*139.7*	*152.0*	*144.6*
Yarns	5.3	239.6	245.3	232.1
Paper and woodpulp	9.8	122.4	155.1	149.0
Chemical products	12.1	105.0	155.4	146.3
Industrial oils and fats	6.0	235.0	156.7	140.0
Fuels	*9.1*	*95.6*	*119.8*	*101.1*
Capital goods	*389.2*	*67.4*	*81.2*	*93.1*
Building materials	39.3	52.7	97.4	101.5
Other materials	45.3	75.3	86.1	91.6
Agricultural machinery and equipment	14.4	88.2	95.1	74.3
Transport and communications	56.7	82.5	78.8	100.2
Industrial and miscellaneous	80.9	76.9	72.2	86.4
Mining[b]	*152.6*	*56.2*	*79.9*	*94.1*

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] Provisional estimates.

[b] Includes only tubes, hydraulic pumps, metal structures for towers and drilling equipment.

were appreciably affected by the large volume of purchases abroad made by the petroleum companies—which were lower in 1951 but rose again in 1952. In terms of U.S. dollars at current prices, 1947-49 imports were valued at 252.1 million dollars, whereas the figure for 1950 was 75.2 millions and 128.4 millions for 1951.[3] Consequently, the composition of imports by groups has changed to a certain extent. (See table 111.)

Whenever the composition of Venezuelan imports is analysed, the characteristic feature will always be a relatively high ratio of consumer goods to total imports (between 41.4 per cent and 50.3 per cent) and an almost negligible proportion of raw materials: only 9.4 per cent of the total in 1951.

The composition of food imports is varied, the most important items being sugar, wheat-flour, dairy products, eggs and ham. In 1951 these foodstuffs accounted for 21.9 per cent of the quantum of total imports. A substantial amount of consumer goods is also imported, including medicinal products and toilet articles, domestic appliances, motor vehicles and various non-essential goods, all of which increased substantially in 1951. (See table 112.)

However, one important feature of consumer goods imports should be emphasized, namely, the decrease of 36.7 per cent in textiles and ready-made clothing, in contrast with an increase of 145.3 per cent in yarn imports (principally rayon) between 1947-49 and 1951. In 1947 and 1948, imports of cotton textiles were abnormally high owing to the difference in price between imports and costly domestic production. The adoption of restrictive measures by the government subsequently reduced purchases of foreign textiles. However, domestic production of cotton has not recovered owing to the fact that its consumption was displaced by rayon in the meanwhile. Towards the end of 1952, a new rayon factory in Venezuela entered production, thus enabling rayon imports to be replaced by dissolving pulp.

Other raw material imports likewise expanded—such as newsprint and woodpulp, chemical products, inedible oils and fats, raw rubber and rubber plates—although in the aggregate they constitute only about 8 per cent of the quantum of imports.

Since imports of capital goods are largely influenced by the volume of purchases abroad made by petroleum companies, the smaller new investments by these companies in 1950 and 1951 were reflected in a decrease in the ratio of capital goods to total imports. However, the expansion observed in 1952 caused a further increase in the proportion to the total composition of imports. Moreover, the volume of goods acquired for industrial and other purposes, as well as agricultural machinery and equipment, building and miscellaneous materials and equipment for transport and communications likewise decreased, as a result of the reduction in the quantum of such imports. These, however, pointed upward again in 1952, with the exception of agricultural machinery and equipment, which continued to decline.

(n) *Central America and Panama*

Costa Rica

Since 1947, Costa Rican exports have shown a marked upward trend continuing throughout 1952, when they surpassed the level for the preceding year. The quantum of Costa Rican imports in 1951 was 24.3 per cent higher than during 1947-49. Changes also took place in their composition in 1951, raw materials increased,

Table 113. Costa Rica: Quantum of imports, by groups

	Average 1947–49	*1950*	*1951*	*Average 1947–49*	*1950*	*1951*
		(millions of dollars at 1948 prices)			*(percentage of the total)*	
TOTAL	*48.6*	*55.9*	*60.4*	*100.0*	*100.0*	*100.0*
Consumer goods	26.2	31.5	30.7	53.8	56.3	51.8
Raw materials	7.4	8.4	12.0	15.3	15.2	19.9
Fuels	4.4	5.2	6.2	9.1	9.3	10.2
Capital goods	10.6	10.8	11.5	21.8	19.3	19.1

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

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[3] These figures include capital goods for working the oil wells, imports of materials, consumer goods, etc.

consumer goods decreased and capital goods (about 19 per cent) remained fairly constant in their relative proportions to the total. (See table 113.)

Increases in absolute terms as compared with the 1947-49 average were recorded for all the groups indicated, including fuels. The most outstanding of these expansions was that of raw materials (62.2 per cent). (See table 114.) Other important increases were those in imports of yarn (cotton and rayon), paper and chemical products, although it should be remembered that in absolute terms the figures are quite low.

Rising fuel and lubricant requirements caused imports of these commodities to increase more than 40.9 per cent in 1951, as compared with 1947-49.

Consumer goods account for the major part of Costa Rican imports. In order of importance, these consist of textiles and ready-made clothing, foodstuffs and motor vehicles, all of which rose in 1951. A substantial proportion of Costa Rica's capacity to import was employed in obtaining certain foodstuffs which the country can produce neither in sufficient quantity nor economically. This applies particularly to wheat and wheat-flour, lard and manufactured milk products.

The supply of capital goods was ample in 1951, and although the proportion did not change in relation to total imports in 1947-49, there was nevertheless an increase of 8.5 per cent in absolute terms. Imports of all the items comprised in this group expanded, with the exception of building materials which fell 23.8 per cent, owing to a reduction of iron tubing, structural steel and iron for construction purposes.

Table 114. Costa Rica: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*
		(1947–49 = 100)	
TOTAL	*48.6*	*115.0*	*124.3*
Consumer goods	*26.2*	*120.2*	*117.2*
Foodstuffs	10.1	127.7	119.8
Textiles and clothing	12.0	119.2	110.8
Domestic appliances	1.2	83.3	100.0
Motor vehicles	1.0	90.0	160.0
Raw materials	*7.4*	*113.5*	*162.2*
Yarns	0.4	200.0	250.0
Paper	0.8	150.0	200.0
Chemical products	4.5	93.3	144.4
Fuels	*4.4*	*118.2*	*140.9*
Capital goods	*10.6*	*101.9*	*108.5*
Building materials	4.2	85.7	76.2
Other materials	1.0	88.9	155.6
Agricultural machinery and equipment	0.5	140.0	120.0
Transport and communications	2.2	95.7	126.1
Industrial and miscellaneous	2.7	129.6	125.9

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

El Salvador

Imports into El Salvador during 1952 remained at the same level as those for 1951 which were, in turn, 14.2 per cent higher than those of 1950.

The fact that an increasing proportion of the country's capacity for external payments must be applied to the acquisition of foodstuffs (bovine cattle, wheat-flour and wheat), textiles, ready-made clothing and pharmaceutical products, has substantially increased the proportion of these products in relation to their position with regards to total imports in 1947-49. In addition, there was a considerable volume of motor vehicles and domestic appliances, so that in 1951 imports of consumer goods accounted for more than 53 per cent of the total. (See table 115.) Of the items mentioned above, foodstuffs (81.5 per cent), motor vehicles (61.5 per cent) and domestic appliances (55.6 per cent) were the most exceptional increases in relation to 1947-49 (see table 116).

The coefficient of raw materials in relation to total imports likewise rose, the upward trend being strongly affected by an increase of 133.3 per cent in chemical products as compared with 1947-49. Imports of paper fell by 12.5 per cent, while those of yarns remained at the same level; these two products respectively are the two leading raw materials imported.

Fuels rose 73 per cent in 1951 as compared with the period 1947-49. Capital goods as a whole showed an improvement of 51 per cent in relation to the aforesaid average. In 1951 there was a remarkable expansion of agricultural machinery and equipment imports (125 per cent) simultaneously with other increases, especially of building materials (52.2 per cent) and other materials (130 per cent).

Guatemala

The partial data available for 1952 suggest that the quantum of Guatemala's imports was lower than in the preceding year. This implies a reversal of the trend in 1950 and 1951, which was one of stabilization (an increase of only 2.4 per cent in 1951 as compared with 1950). But, contrasted with 1947-49, imports in 1951 showed a relative increase of 25 per cent.

The structure of imports in 1951, as compared with 1947-49, shows only slight alterations in the proportion of

Table 115. El Salvador: Quantum of imports, by groups

	Average 1947–49	*1950*	*1951*	*Average 1947–49*	*1950*	*1951*
		(millions of dollars at 1948 prices)			*(percentage of the total)*	
TOTAL	*41.1*	*55.4*	*63.2*	*100.0*	*100.0*	*100.0*
Consumer goods	22.6	31.3	33.6	54.9	56.4	53.2
Raw materials	4.1	6.6	7.4	10.1	11.9	11.7
Fuels	2.2	3.0	3.8	5.3	5.5	6.0
Capital goods	12.2	14.5	18.4	29.7	26.2	29.1

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

Table 116. El Salvador: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*
		(1947–49 = 100)	
Total	*41.1*	*134.8*	*153.8*
Consumer goods	*22.6*	*138.5*	*148.7*
Food stuffs	5.4	146.3	181.5
Textiles and clothing	8.1	127.2	124.7
Pharmaceutical goods and toilet articles	2.1	123.8	123.8
Domestic appliances	2.7	133.3	155.6
Motor vehicles	1.3	153.8	161.5
Raw materials	*4.1*	*161.0*	*180.5*
Yarns	0.5	80.0	100.0
Chemical products	1.8	177.8	233.3
Paper	0.8	100.0	87.5
Fuels	*2.2*	*136.4*	*172.7*
Capital goods	*12.2*	*118.0*	*150.8*
Building materials	2.3	139.1	152.2
Other materials	1.0	130.0	230.0
Agricultural machinery and equipment	0.4	75.0	225.0
Transport and communications	4.6	110.9	128.3
Industrial and miscellaneous	3.9	115.4	146.1

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

consumer goods and fuels. (See table 117.) Various important changes took place, however, in relation to the composition of imports in 1950, the most outstanding of which was the reduction in consumer goods and expansion of capital goods.

A regular expansion of consumer goods is observed throughout this period, particularly of foodstuffs (wheat-flour, lard, prepared milks), domestic appliances and motor vehicles expanded as described, while on the other hand textiles and ready-made clothing, which had risen in relation to 1947-49, fell sharply as compared with their volume in 1950.

Imports of raw materials in Guatemala are usually small. Among these, textile fibres diminished 68.7 per cent and cotton was almost entirely replaced by the increasing domestic production. On the other hand, imports of yarn and chemical products were greater.

Fuels, which have increased 11.3 per cent on the figures for 1947-49, decreased in relation to their 1950 volume. Capital goods in 1951 accounted for the same proportion of total imports as 1947-49, but showed an increase of 23.6 per cent in their total volume. The most significant increases were those of agricultural machinery and equipment, the volume of which is practically doubled, and of building and other materials. Commodities for industrial and other purposes, which had shown an increase of only 10.5 per cent on the 1947-49 figures, also represented a higher proportion of capital goods than previously (33.5 per cent), and easily surpassed their 1950 level.

Honduras

During 1952, the quantum of imports in Honduras was higher than that for the preceding year. It is interesting to note that in 1951 total imports were 18.3 per cent greater than for the period 1947-49. Expansion was unequal in each of the groups comprising total imports, thus giving rise to a slight change in their composition, consisting principally of a larger proportion of raw materials and fuels. (See table 119.)

In fact the proportion of raw materials in relation to total imports in 1951 was 43.3 per cent more than in 1947-49. This expansion was caused principally by an increase of 62.5 per cent for chemical products, which in 1950 had declined by 6.3 per cent. Fuels and lubricants remained static over the same period. (See table 120.)

Capital goods as a whole showed an increase of only 1.8 per cent, featured mainly by the sudden reduction of industrial and other goods (28.6 per cent). On the other hand, other capital goods showed an upward trend, particularly agricultural machinery and equipment (20 per cent) and transport and communications equipment (18.7 per cent).

In 1951 a rise of 28 per cent, as compared with 1947-49, was observed for consumer goods composed principally of textiles and ready-made clothing (55.4 per cent), in which the increase was substantial. The ratio of foodstuffs to total imports was lower than in other Central American countries, but likewise showed a strong upward trend (34.2 per cent) caused principally by a large volume of sugar and wheat imports.

Nicaragua

The quantum of Nicaragua's imports in 1951 was 32.0 per cent higher than the 1947-49 average. Since little industrialization has taken place in Nicaragua, consumer goods represent more than 50 per cent of the quantum of imports, while raw materials and fuels account for only a small percentage thereof. (See table 121.) Capital goods, which at present amount to about one-quarter of total imports, in fact comprise only a few commodities.

Table 117. Guatemala: Quantum of imports, by groups [a]

	Average 1947–49	*1950*	*1951*	*Average 1947–49*	*1950*	*1951*
		(millions of dollars at 1948 prices)			*(percentage of the total)*	
Total	*67.9*	*82.9*	*84.9*	*100.0*	*100.0*	*100.0*
Consumer goods	32.0	43.3	41.6	47.1	52.2	49.0
Raw materials	9.4	11.0	11.3	13.9	13.3	13.3
Fuels	6.2	7.5	6.9	9.1	9.0	8.1
Capital goods	20.3	21.1	25.1	29.9	25.5	29.6

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] The f.o.b. figures indicated in official statistics were transformed into c.i.f. prices by using the weighting factors published in *International Financial Statistics*, of the International Monetary Fund.

Two items stand out among consumer goods, namely, foodstuffs (20.5 per cent) and textiles and ready-made clothing (37 per cent). The expansion in the volume of these two items is largely responsible for the over-all increase of imports. However, although the volume, in absolute terms, is smaller, substantial increases have also been noticed in imports of pharmaceutical products and toilet articles, motor vehicles, and domestic and metal appliances. '(See table 122.)

The 1951 level of raw material imports was 42.8 per cent higher than in 1947-49. The most obvious changes effected were the increases of cotton thread and yarn, newsprint and chemical products composed largely of explosives, paints and dyes (52.5 per cent). Fuels and lubricants rose 47.6 per cent above their 1947-49 average.

In 1951, imports of capital goods expanded substantially in relation to the preceding year; this was especially true of agricultural machinery and equipment, industrial equipment, and building and other materials. The volume of transport and communications equipment imported was smaller, although it was more than twice as great as the 1947-49 average.

Table 118. Guatemala: Quantum of selected imports

	Average 1947—49 (millions of dollars at 1948 prices)	1950	1951
		(1947-49=100)	
TOTAL	*67.9*	*122.1*	*125.0*
Consumer goods	*32.0*	*135.3*	*130.0*
Foodstuffs	7.9	146.8	164.5
Textiles and clothing	12.8	138.3	113.3
Pharmaceutical goods and toilet articles	1.8	122.2	116.7
Domestic appliances	2.5	128.0	124.0
Motor vehicles	1.9	131.6	152.6
Raw materials	*9.4*	*117.0*	*120.2*
Textile fibres	1.6	87.5	31.3
Yarns	1.6	131.2	137.5
Chemical products	3.4	105.9	138.2
Fuels	*6.2*	*121.0*	*111.3*
Capital goods	*20.3*	*103.9*	*123.6*
Building materials	2.5	180.0	140.0
Other materials	2.4	91.7	120.8
Agricultural machinery and equipment	2.0	115.0	200.0
Transport and communications	5.8	81.0	108.6
Industrial and miscellaneous	7.6	97.4	110.5

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

Republic of Panama

In contrast to the trend of events in the majority of the Latin-American countries, the general tendency of imports in the Republic of Panama has been downwards throughout the period 1947-51, although in 1952 there was an improvement of 8.6 per cent over 1947-49.

The contraction in the volume of imports in 1950 and 1951 affected fuels, capital goods and raw materials (see table 123). In 1952, although there was a rise in the absolute value of these three groups of goods above 1950-51 levels, they did not exceed the figures for 1947-49. Instead, the increase was concentrated in consumer goods. Foodstuffs, including wheat-flour, lard, butter and cigarettes, absorbed 33.4 per cent of such imports, although there were increases also in pharmaceutical products, toilet articles and motor vehicles until 1951.

The slowing down of economic activity in 1950, 1951 and 1952 seems to have been partly responsible for the contraction in imports of capital goods, fuel and raw material imports. However, within the latter group, yarns and chemical products increased.

Except for agricultural machinery and equipment, which rose sharply in 1952, other capital goods declined sharply, particularly in 1951 and 1952; among these figure imports of building materials (39.4 per cent), transport and communications equipment (42.6 and 27.7 per cent) and capital goods for industrial and other purposes (33.3 and 18.2 percent).

Table 119. Honduras: Quantum of imports, by groups [a]

	Average 1947–49	1950	1951	Average 1947–49	1950	1951
	(millions of dollars at 1948 prices)			(percentage of the total)		
TOTAL	*37.2*	*40.3*	*40.4*	*100.0*	*100.0*	*100.0*
Consumer goods	18.9	22.8	24.2	50.7	56.6	54.9
Raw materials	3.0	3.1	4.3	8.0	7.7	9.7
Fuels	4.0	4.9	4.0	10.9	12.1	9.2
Capital goods	11.3	9.5	11.5	30.4	23.6	26.2

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] The f.o.b. figures indicated in official statistics were transformed into c.i.f. prices by using the weighting factors published in *International Financial Statistics*, of the International Monetary Fund.

Table 120. Honduras: Quantum of selected imports

	Average 1947—49 (millions of dollars at 1948 prices)	1950	1951
		(1947-49=100)	
TOTAL	*37.2*	*108.3*	*118.3*
Consumer goods	*18.9*	*120.6*	*128.0*
Foodstuffs	3.8	118.4	134.2
Textiles and clothing	9.2	126.1	145.7
Pharmaceutical goods and toilet articles	2.6	107.7	96.2
Raw materials	*3.0*	*103.3*	*143.3*
Yarns	0.3	166.7	100.0
Chemicals	1.6	93.7	162.5
Fuels	*4.0*	*122.5*	*100.0*
Capital goods	*11.3*	*84.1*	*101.8*
Building materials	2.9	89.6	110.3
Other materials	0.7	85.7	114.3
Agricultural machinery and equipment	1.0	70.0	120.0
Transport and communications	3.2	87.5	118.7
Industrial and miscellaneous	3.5	80.0	71.4

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

Table 121. Nicaragua: Quantum of imports, by groups [a]

	Average 1947–49	*1950*	*1951*	*Average 1947–49*	*1950*	*1951*
		(millions of dollars at 1948 prices)			*(percentage of the total)*	
Total	*26.8*	*33.3*	*35.5*	*100.0*	*100.0*	*100.0*
Consumer goods	13.6	20.3	19.5	50.6	60.8	54.7
Raw materials	2.8	2.9	4.0	10.5	8.8	11.3
Fuels	2.1	3.0	3.1	7.9	8.9	8.9
Capital goods	8.3	7.1	8.9	31.0	21.5	25.1

Source: Compiled by the Economic Commission for Latin America, on the basis of officia statistics.

[a] The f.o.b. figures indicated in official statistics were transformed into c.i.f. prices by using the weighting factors published in *International Financial Statistics*, of the International Monetary Fund.

Table 122. Nicaragua: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*
		(1947–49=100)	
Total	*26.8*	*124.2*	*132.5*
Consumer goods	*13.6*	*149.3*	*143.3*
Foodstuffs	2.8	150.0	142.8
Textiles and clothing	5.3	166.0	135.8
Pharmceutical goods and toilet articles	1.4	150.0	164.3
Domestic appliances	0.3	200.0	233.3
Motor vehicles	1.3	123.1	169.2
Raw materials	*2.8*	*103.6*	*142.8*
Yarns	0.4	125.0	125.0
Newsprint	0.1	200.0	200.0
Chemical products	1.4	78.6	150.0
Fuels	*2.1*	*142.8*	*147.6*
Capital goods	*8.3*	*85.5*	*107.2*
Building materials	0.3	100.0	133.3
Other materials	1.2	125.0	166.7
Agricultural machinery and equipment	0.5	160.0	220.0
Transport and communications	0.3	333.3	266.7
Industrial and miscellaneous	6.0	58.3	76.7

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

On the other hand, throughout 1951 consumer goods as a whole showed an increase of 8.3 per cent as compared with 1947-49, largely as a result of an expansion in foodstuffs, textiles, ready-made clothing, pharmaceutical goods and toilet articles. This trend was also apparent in 1952.

3. The composition of exports

Latin America's export trade continues to be dominated by a small group of products, fourteen of which account, together, for between 70 and 75 per cent of the total volume dispatched abroad. In 1950 and 1951, appreciable fluctuations had already been observed among individual commodities, the quantum of which in some cases rose and in others declined appreciably, during 1952.

In 1951, the most striking feature was the relative increase in petroleum exports, and on a smaller scale, in wheat and wheat-flour. (See table 125 and plate 34.) Conversely, there was a weakening in the relative position of coffee, maize, beef, wool, silver and cotton exports, while the level of cotton, cocoa, bananas, sugar, tin and zinc remained fairly stable. However, in 1952, petroleum exports continued to rise, whereas those for wheat almost disappeared. This deterioration affected the relative importance of other products which, like coffee, bananas, sugar, copper, zinc and lead increased their proportion in the total exports. Although these were the most outstanding changes in 1952, fluctuations also occurred in the quantum of other exports.

Table 123. Republic of Panama: Quantum of imports, by groups[a]

	Average 1947–49	*1950*	*1951*	*1952* [b]	*Average 1947–49*	*1950*	*1951*	*1952* [b]
		(millions of dollars at 1948 prices)				*(percentage of the total)*		
Total	*82.8*	*77.1*	*78.6*	*89.9*	*100.0*	*100.0*	*100.0*	*100.0*
Consumer goods	55.6	58.6	60.2	66.1	67.1	75.9	76.6	73.5
Raw materials	7.6	5.5	6.7	7.5	9.2	7.1	8.5	8.3
Fuels	4.1	2.8	1.1	2.4	5.0	3.7	1.4	2.7
Capital goods	15.5	10.2	10.6	13.9	18.7	13.3	13.5	15.5

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] The f.o.b. figures indicated in official statistics were transformed into c.i.f. prices by using the weighting factors published in *International Financial Statistics*, of the International Monetary Fund.

[b] Estimated on the basis of provisional data.

In 1951 and 1952 petroleum accounted for 23.9 and 29.2 per cent of the over-all quantum of Latin-American exports. In these two years, exports shipped from Colombia, Mexico, and Ecuador were higher than in 1947-49, but the sharp upward tendency was largely determined by Venezuela, which in 1951-52 exported a little over 90 per cent of the petroleum from the region.

Table 124. Republic of Panama: Quantum of selected imports

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*	*1952*[a]
		(1947–49 = 100)		
TOTAL	*82.8*	*93.1*	*94.9*	*108.6*
Consumer goods	*55.6*	*105.2*	*108.2*	*118.9*
Foodstuffs	18.0	111.7	127.8	126.1
Textiles and clothing	13.2	115.9	103.8	162.9
Pharmaceutical goods and toilet articles	2.1	100.0	123.8	147.6
Motor vehicles	4.8	127.1	145.8	87.5
Domestic appliances	3.1	106.5	93.5	77.4
Raw materials	*7.6*	*72.4*	*88.2*	*98.7*
Yarns	0.3	166.7	133.3	133.3
Chemical products	3.4	82.4	120.6	126.5
Fuels	*4.1*	*68.3*	*26.8*	*58.5*
Capital goods	*15.5*	*65.8*	*68.4*	*89.7*
Building materials	3.3	54.5	60.6	60.6
Other materials	3.1	74.2	90.3	100.0
Agricultural machinery and equipment	1.1	100.0	81.8	245.5
Transport and communications	4.7	53.2	57.4	72.3
Industrial and miscellaneous	3.3	75.8	66.7	81.8

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] Preliminary figures.

In contrast to petroleum, practically no wheat and wheat-flour were exported from Latin America in 1952. Owing to the intense drought of the preceding year in Argentina, only 63,000 metric tons were exported by that country. In 1950 and 1951 total shipments of these two commodities had surpassed their 1947-49 levels, by 27.8 per cent and 18.1 per cent respectively, although the volume was well below pre-war export figures.

The position of maize is similar. A sharp decline of exports was observed in 1950, 1951 and 1952, as a result of the substantial decrease in the area on which this cereal was sown in Argentina and the years of serious drought. The contraction of the export quantum in 1951 and 1952 represented 72 and 67 per cent as compared with 1947-49.

Beef exports likewise declined considerably in 1951 and 1952. This trend was already apparent in previous years, resulting from the serious droughts which affected cattle stocks and the sharp increase of Argentina's domestic consumption. An interruption in shipments to the United Kingdom during the first half of 1951 was also responsible for this downward trend. Because of the striking fall in Argentine exports, those from Uruguay rose in relation to 1947-49, although the Uruguayan total was smaller than in 1950. In 1951, the small volume of exports from Brazil also diminished.

In 1951 and 1952 there was also a sharp drop in wool exports from the region, which fell 52.3 and 29.7 per cent in relation to 1947-49. The reduction of almost 50 per cent in the international price in April 1951 caused shipments from Argentina and Uruguay to be suspended. However, in mid-1952, exports were renewed so that the 1952 volume was greater than that of 1951 and similar to that of 1949.

Table 125. Latin America: Quantum of exports of fifteen principal products

	Average 1947–49 (millions of dollars at 1948 prices)	*1950*	*1951*	*1952*[b]	*Average 1947–49*	*1950*	*1951*	*1952*[b]
		(1947–49 = 100)			*(percentage of the total)*			
Coffee	850.3	89.2	95.1	97.3	13.4	11.6	12.5	14.8
Cotton	258.0	103.7	107.3	90.7	4.1	4.1	4.3	4.2
Cocoa	129.5	124.4	96.9	74.3	2.0	2.5	1.9	1.7
Bananas	51.2	96.0	96.0	103.6	0.8	0.8	0.8	0.9
Sugar	636.9	89.9	98.4	97.3	10.0	8.8	9.7	11.1
Beef	178.0	82.0	74.9	50.4	2.9	2.2	2.1	1.6
Wool	182.3	112.4	47.7	70.3	2.8	3.1	1.3	2.3
Wheat and wheat-flour	411.7	127.8	118.1	10.5	6.5	8.1	7.5	0.8
Maize	203.3	39.4	28.0	33.0	3.2	1.2	0.9	1.2
Petroleum and its by-products	1,187.7	116.1	130.4	137.1	18.7	21.1	23.9	29.2
Copper	224.5	89.0	88.5	90.5	3.5	3.1	3.1	3.6
Tin	84.6	90.1	95.0	91.6	1.3	1.2	1.2	1.4
Silver	36.9	108.9	80.2	52.2	0.6	0.6	0.5	0.3
Zinc	34.3	113.6	128.9	148.9	0.5	0.6	0.7	0.9
Lead	91.3	132.5	110.2	122.8	1.4	1.9	1.6	2.0

Source: Compiled by the Economic Commission for Latin America, on the basis of official statistics.

[a] National export statistics often adopt arbitrary valuation methods for certain commodities, particularly bananas and certain minerals. Although it is evident that the prices of commodities in this category are undervalued, the actual value is not known and the official figures are thus used in the above table.

[b] Provisional estimates.

The level of coffee exports in 1952 was slightly higher than in 1951 and also than the low 1950 figure. Nevertheless, 1952 exports were slightly below the 1947-49 average. In view of the high proportion of Brazilian and Colombian coffee in relation to total coffee exports from this area, the decline can largely be attributed to the downward trend of shipments from these two countries, counterbalancing the small increases observed in other countries. It should be recalled that coffee exports in 1947 and 1948, particularly from Brazil and Colombia, were higher than usual since stocks from preceding years were sold.

Cotton stocks in both 1947 and 1948 affected the volume of exports of this fibre. Consequently, 1952 exports, which were lower than those of 1951, were likewise below the average observed in 1947-48. This was largely the result of a sharp contraction in Brazilian cotton exports in 1952, although in 1951 this country had contributed 43 per cent of the total cotton exports from the area. On the other hand, exports from the two other outstanding producers of this fibre—Peru and Mexico—showed a large increase in 1951 and were substantially greater than 1947-49.

The fluctuations of the three other products of tropical agriculture, namely—sugar, bananas and cocoa, differed. In 1952 sugar declined slightly, bananas rose and cocoa decreased appreciably. Sugar exports, although 1.6 per cent lower in 1951 than 1947-49, rose in 1952 as a result of increased production in Cuba. In 1951 Cuban exports made up 86 per cent of the total sugar exports from Latin America. A decline was noted in exports from Brazil and Peru (which recovered in 1952) while those of Haiti and the Dominican Republic increased in 1952. Cocoa exports in 1951 were 3 per cent below 1947-49 and decreased by 25 per cent in 1952 as compared with 1947-49. Between 1947 and 1951 sharp variations were observed in cocoa exports from all the Latin-American producer countries, particularly Brazil, which provided 60 per cent of the total volume shipped from the area. Banana exports were higher in 1952 than in 1951, nevertheless, Brazilian exports dropped sharply in 1952 as a result of droughts which affected production. Reference should likewise be made to the fact that, although in 1947-49 exports from Ecuador amounted to only 6 per cent of total Latin-American banana exports, the appreciable relative increase of its 1952 shipments placed this country among the main exporters of this fruit.

In addition to petroleum, among other important mining products the relative positions of zinc and lead also improved during 1952, being 48.9 per cent and 22.8 per cent, respectively, above the period 1947-49. Both Peruvian and Mexican zinc exports contributed to the stability of the quantum of these exports. In contrast to zinc, exports of other mining products dropped sharply. Copper

Table 126. Latin America: Export prices and the terms of trade, by products [a]

(1948 = 100)

Products	*1947*	*1949*	*1950*	*1951*	*1952* [b]
			Export prices		
Maize	87.1	70.9	52.8	98.0	..
Wheat	71.8	71.7	37.3	43.3	45.0
Beef	89.5	139.3	103.3	135.3	144.0
Cocoa	71.1	49.0	73.7	89.3	111.3
Coffee	101.4	116.3	208.0	230.6	216.4
Cotton	82.4	109.7	114.9	203.9	157.1
Tin	80.2	99.4	94.1	131.1	115.0
Copper	94.5	92.6	92.8	114.3	136.0
Sugar	113.1	101.0	108.5	114.4	101.0
Silver	100.3	94.0	97.2	118.4	112.0
Bananas	100.9	101.1	100.7	127.2	126.0
Zinc	102.5	101.0	113.3	158.4	..
Greasy wool	86.1	118.7	145.7	177.6	105.0
Petroleum	72.5	97.8	94.8	97.3	97.8
TOTAL OF 14 PRODUCTS	*85.9*	*97.6*	*102.1*	*116.6*	*106.8*
			Terms of trade for imports		
Maize	95.4	73.8	61.3	95.1	..
Wheat	78.6	74.6	43.3	42.0	43.7
Beef	98.0	145.0	119.8	131.2	139.8
Cocoa	77.9	51.0	85.5	86.6	108.1
Coffee	111.1	121.0	241.3	223.7	210.1
Cotton	90.3	114.2	133.3	197.8	152.7
Tin	87.8	103.4	109.2	127.2	111.7
Copper	103.5	96.4	107.7	110.9	132.0
Sugar	123.9	105.1	125.9	111.0	98.1
Silver	109.9	97.8	112.8	114.8	108.7
Bananas	110.5	105.2	116.8	123.4	122.3
Zinc	112.3	105.1	131.4	153.7	..
Greasy wool	94.3	123.5	169.0	172.3	101.9
Petroleum	79.4	101.8	110.0	94.4	94.8
TOTAL OF 14 PRODUCTS	*94.1*	*101.6*	*118.4*	*113.1*	*102.9*

Source: Economic Commission for Latin America, on the basis of official statistics.

[a] The indices in this table are based on export and import prices shown in official statistics, converted to dollars.

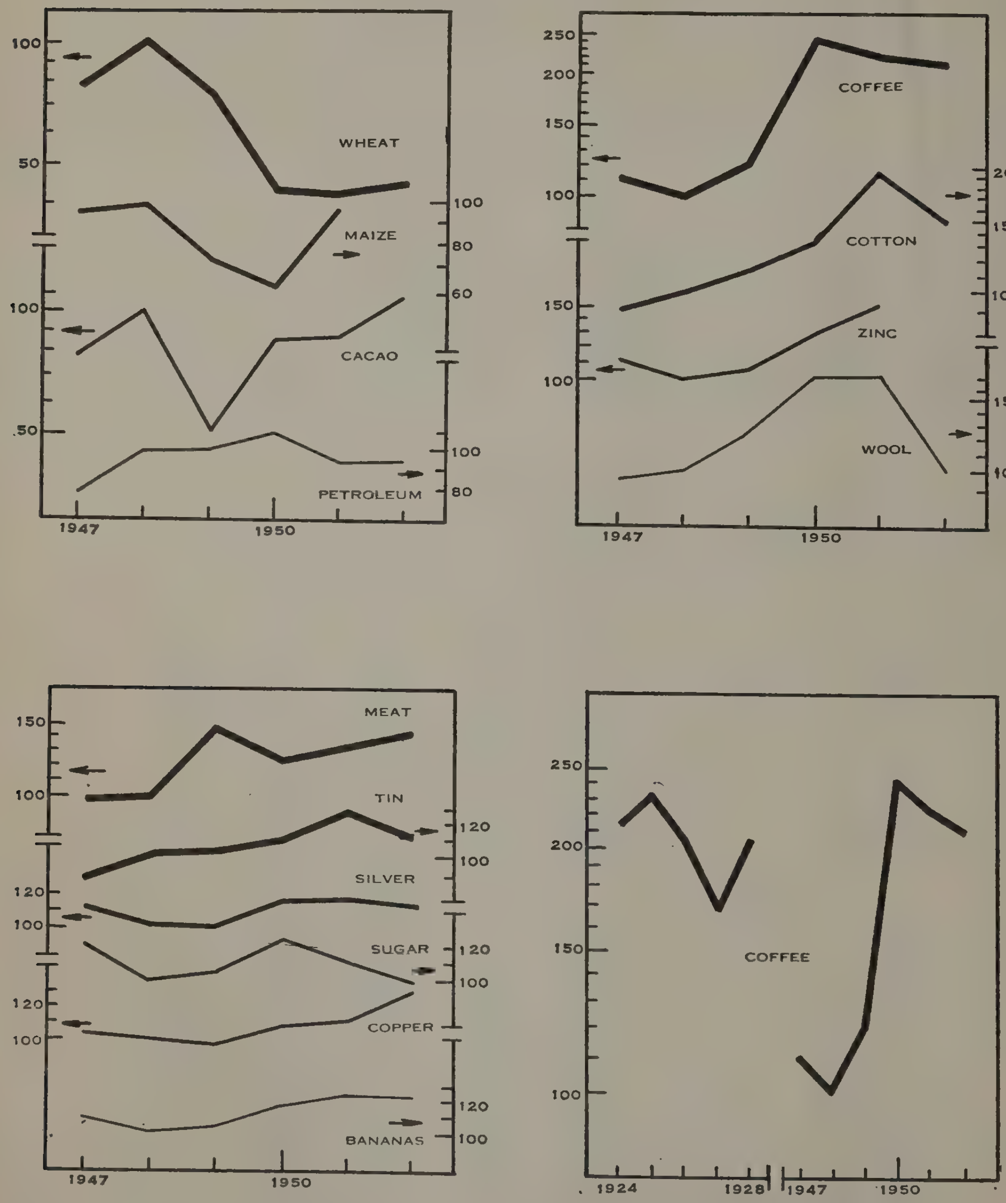
[b] Provisional estimates.

Plate 37

TERMS OF TRADE BY PRODUCTS, IN LATIN AMERICA, 1947-52

1948 = 100

(Semi-logarithmic scale)



exports, affected largely by Chile, have been lower since 1950 than the 1947-49 level. Mexican exports rose slightly, while those from Peru maintained the same level.

Although in 1951 tin exports had to some extent risen from their low level of 1950, they did not reach the average for 1947-49; in fact, they subsequently declined in 1952 as the result of partial suspension of shipments to the United Kingdom and the United States.

Lastly, silver exports in 1952 suffered a further sharp fall, after their contraction in 1951, when the quantum of exports was 47.8 per cent below the 1947-49 average.

4. THE TERMS OF TRADE OF SELECTED EXPORT PRODUCTS

The prices of fourteen main Latin-American exports [4] were, in the whole, lower during the third and fourth quarters of 1952 than during 1951. This will be seen with extreme clarity in the case of wool, the price of which dropped sharply in April 1951, and to a less extent, in connexion with cotton, sugar and wheat. Among the metals group, this decline likewise affected tin and zinc, although on a smaller scale than other items indicated above. On the other hand, certain agricultural products, such as coffee and bananas, revealed a marked degree of stability as regards the high prices attained in the course of 1951.

The slight upward trend of Latin-American import prices throughout 1952, as compared with 1951, caused a deterioration of 9 per cent in the 1952 terms of trade of these fourteen exports in relation to the preceding year. (See plate 37 and table 126.)

In 1951, the terms of trade had already dropped 4.5 per cent below their level for 1950, which had been the highest of the post-war period. Although prices of all the fourteen products selected were higher in 1951 than in 1950—in some cases the difference was quite appreciable—it should be recalled that the increment to import prices was likewise substantial; indeed, the advantages gained by the high export price level were annulled and in the case of some commodities, such as wheat, coffee, sugar and petroleum, the upward trend of import prices caused a weakening in the terms of trade for imports in general.

With the exception of the prices of maize, wheat, cocoa and petroleum the terms of trade of the remaining commodities in 1951 were more favourable than those of imports. Special attention should be drawn to the intensity of this trend in the case of coffee, cotton, wool and zinc, and, although important, to a lesser degree in the case of tin, copper, sugar, silver, bananas and beef. High wool exports were limited to the first four months of 1951, which explains why the sharp drop in international wool prices, beginning in April, is not reflected in the corresponding indices. A downward trend was observed in the terms of trade for maize and wheat (4.9 per cent and 58.0 per cent, respectively) during 1951, as compared with 1948, when they had reached their highest level, equal to that of 1937. Hence the 1951 figures represent a deterioration, in absolute terms, in the case of both these products. The position of petroleum was fairly similar. By contrast, despite a weakening of 13.4 per cent in 1951 as compared with 1948, cocoa remained at an exceptionally high level, owing to the substantial difference between export prices in 1948 and 1937 (more than 600.0 per cent).

Table 127. Latin America: Coffee. The terms of trade (1948 = 100)

1924	218.9	1947	110.9
1925	237.4	1948	100.0
1926	204.8	1949	125.1
1927	168.2	1950	262.9
1928	209.0	1951	240.5
.....	.....	1952	227.5

Source: Economic Commission for Latin America, on the basis of official statistics.

The favourable terms of trade for other products in 1950 and 1951, as compared with 1948, only implied, in most cases, a recovery to levels attained in earlier periods. For instance, the terms of trade for coffee in relation to imports were much more favourable in 1950 and 1951, yet these figures merely corresponded to similar levels reached in 1924 and 1925. (See table 127.) This long-term aspect is a prime factor in assessing the present levels of the terms of trade, which, in fact, have tended to weaken since 1951.

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[4] The fourteen exports selected are shown in table 126. Together, they account for approximately 70 per cent of total shipments from the region.

Part III

TRENDS IN THE PRINCIPAL SECTORS OF PRODUCTION

Chapter I

AGRICULTURE[1]

1. Introduction

During the last few years, the external and domestic conditions under which Latin-American agriculture has developed have generally proved favourable to a productive increase and an uninterrupted process of investment and reinvestment. Firstly, world prices for agricultural products remained satisfactory over a long period; secondly, development programmes and the relatively high level of domestic incomes have created a steady demand, in many cases unsatisfied, for basic consumer products. Nevertheless, although several countries succeeded in raising production, either for domestic consumption or export, others laboured under powerful depressive factors. This applies to Argentina, whose influence upon the figures for Latin-American agriculture is so great that the progress recorded in 1951 and 1952 by the other countries was completely offset by the pronounced decline in Argentine production for this period. Thus, the region's aggregate production (including Argentina) fell by 2 per cent during 1952; but, if Argentina is excluded, a rise of 7 per cent is apparent. Furthermore, while per capita production for the entire region is estimated at 4 per cent below the 1948 figure, and 11 per cent below that of the pre-war period, with the exclusion of Argentina, these results are converted into increases of 8 and 6 per cent, respectively.

The decline in Argentine production was particularly acute in the cases of meat, potatoes, wheat, maize and other cereals. Excluding Argentina, the region's wheat production in 1952 rose 11 per cent above the 1948 figure, but when the figures for Argentina are added, the result shows a decrease of 45 per cent. Similar comparisons may be made for the other crops, for foodstuffs as a whole and for industrial oilseeds in addition. Although other countries also registered decreases for certain products during 1952—e.g., rice and tobacco in Brazil, cotton and bananas in Mexico and potatoes in Peru—their effect on the total production of the area was not nearly as marked as that of the Argentine cereals and oilseeds, and were in any case largely offset by the higher output of cotton, hard fibres, sugar, cacao, coffee, edible oilseeds and other commodities.

Nevertheless, the Argentine agricultural crisis of 1951-52 cannot be considered as an isolated phenomenon, since, directly or indirectly, it affected not only the supply of available foodstuffs for various other Latin-American countries, but also the balance of payments and the plans for economic development of a considerable sector of the region. Moreover, at the time of this crisis—brought on by two consecutive years of drought—the policy of high agricultural prices followed in Argentina, as well as other elements in this country's economic policy, encouraged a closer study of the problems of agricultural production in all those countries where development programmes of importance were being carried out.

In some countries, the efforts now being made in the field of agriculture represent a fundamental change of attitude towards this activity. During the last few years, development in the more representative areas of Latin America has been by preference directed towards industrialization, a policy which has absorbed the more vigorous part of the stimulus provided by governments and private enterprise. A number of the smaller countries have adopted a similar policy. Moreover, the restrictions on international trade, resulting from the Second World War and the period immediately following it, led to a situation particularly favourable to the growth of industry.

In certain cases, action within the sphere of economic expansion had the effect of devirting resources, directly or indirectly, from agriculture into other sectors. In some cases, governments have attempted to isolate domestic prices from the fluctuations on overseas markets. This has been attempted through the centralization of official purchasing for export, causing a proportion of the farmers' profits to be absorbed and withdrawing much of the incentive to produce for the high prices available on the world market. Elsewhere, similar effects were caused by price controls. Capital transfers, which such measures of economic policy were designed to encourage—and which in certain circumstances might have proved beneficial to the general economy—have contributed to widen the breach existing in some countries between agricultural production and demographic growth.[2] Similarly, they have helped to intensify the tendency whereby agricultural savings do not usually return to the land in a sufficient quantity either to stimulate investment or to maintain it at an adequate level to prevent a decline in productivity. In some countries, the internal processes of inflation have operated in a similar manner, causing a deterioration in the terms of trade for agriculture and inducing farmers to buy land, thus withdrawing from circulation funds which might otherwise have been used to increase productivity.

Recently, and in specific cases, the problem of foreign exchange shortages has become acute. Firstly, it has hampered adequate imports of the necessary machinery, equipment, fertilizers and insecticides required to increase productivity in accordance with official agricultural development programmes. Secondly, such shortages prevent the satisfaction of the potential demand either for these imports in farming areaas or for crops with a tendency opposed to the general decline.

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[1] The basic material and the interpretations contained in this chapter were prepared by the Agriculture Division, which is jointly staffed by the Economic Commission for Latin America and the Food and Agriculture Organization of the United Nations.

[2] This breach appears in Latin-American agriculture as a whole. If Argentina is excluded, per capita production is higher, as already noted. However, there are a number of countries, such as Chile, Guatemala, Paraguay and Bolivia, where agricultural production shows a per capita decrease.

If the behaviour of Latin America's agricultural exports as a whole is studied, it wll be found that they have also continued to decline substantially. This factor underlines the obstacles hindering the region as a whole from supporting its rapidly growing population and from maintaining agricultural exportable surpluses at levels which would permit capital goods imports to meet development requirements. However, certain products, which are readily absorbed, have not, through the quantum of agricultural exports, fully satisfied a world demand caused by increases in real income among the principal consumers, the industrial centres, and reflected in their high price on the international market.[3] These statements—qualified though they may be in certain specific cases, particularly Cuba and Mexico—nevertheless apply to the countries of the region as a whole. In this connexion allowance must be made both for the minimum period necessary to expand the productive capacity of each agricultural activity and the reactions of domestic demand caused by the rise in income, such as the changes in that demand to the benefit of some activities and to the detriment of others which the displacement of productive factors might have provoked. All these facts are of profound significance when it is considered that the export capacity of agriculture forms Latin America's most powerful asset for its purchases from abroad and is the dynamic external impetus for its economic development.

This process and the concern it has engendered is reflected in various programmes for the expansion of agriculture. Thus an effort has been made to stimulate domestic production of foodstuffs and raw materials of agricultural origin, with the object of increasing the capacity to import capital goods. This new interest in encouraging primary activities does not by any means indicate a decision on the part of the Latin-American countries to continue as entirely agricultural entities or to ignore industrialization. In reality, it represents a more balanced view of the whole problem of development. During the last few years the conviction has grown that the ultimate objective of government action is economic development, and that the problems confronting a country cannot be resolved by isolated measures, but require a far-sighted policy, by means of which the structure of production and the composition of imports may be modified. Under a policy of this nature, industrialization must necessarily advance hand in hand with technological progress and the expansion of agriculture, profiting from the considerable possibilities for increasing the yield from the land and labour productivity as well as for expanding the present areas of cultivation. In Argentina, for example, the promotion of agricultural and stock-raising activities was again reflected in recent official statements on economic policy in which the interdependence of industrial and agricultural development is the central theme.

This revival of public interest in the problems of agricultural production is common to the whole of Latin America, and is being crystallized in the form of government development policies which make use of new, and more efficient, expedients. The industrialization already achieved has itself created facilities and incentives for the growth of primary production. This principle of stimulating agriculture takes different forms, though, in particular, the increase of public expenditure in this sphere should be noted, together with the greater attention paid to the services for research, training and credit, the establishment of subsidies and systems of minimum prices and, in some cases, the co-ordination and putting into effect of production programmes with definite objectives, the significance of which it would be superfluous to underline. In their later phases, moreover, the measures listed above have been able to utilize the United Nations Expanded Programme of Technical Assistance and the collaboration of other domestic and foreign organizations.

With the exceptions of Mexico, where the government has continued to invest substantially in irrigation, and Brazil, where the clearing of new areas is proceeding spontaneously to replace those which have been over-cultivated, official agricultural development schemes are devoted more to technological improvements and the intensification of existing activities than to expansion through the incorporation of new areas. This preference seems to be based upon the high costs of opening up new lands for cultivation, and probably upon the minor success achieved by some earlier colonization schemes. However, the method of developing agriculture by increasing the area cultivated has not been abandoned altogether. Although requiring heavy initial investments, it forms an easier and more direct means of increasing production. More important still, the results obtained are similar to those observed when techniques are improved, through the necessity for relieving the excessive pressure of the population upon the resources in certain sectors of the existing cultivated areas. In the over-populated agricultural zones it is the task of the city to absorb the surplus labour. Nevertheless, the accomplishment of this mission (at the present stage of development and particularly in certain specific places) may well be hastened by the addition of new arable areas, not only because the absorption of workers in industry is still a slow process in Latin America, but also because there are possibilities of agricutural expansion and the effect of such growth on the gross geographic product might be greater than that exercised by industry.

However, it may readily be understood that an interest in this subject and the drafting of programmes are not of themselves sufficient to produce the desired results. It would be premature to assess the soundness and efficacy of the measures which have been adopted to date, some of which will be discussed in detail further on. It is appropriate to point out that new government policies are, in most cases, faced with various adverse factors, combining to weaken the productive force which otherwise could be developed. Among these factors, three are outstanding. Firstly, there is the lack of reinvestment in certain sectors of Latin-American agriculture, especially coffee in Brazil and cereals in Argentina. A second element is the long interval required to raise the productive capacity of coffee and the difficulties in purchasing the machinery needed to cultivate cereals in Argentina. Finally, there exists the pressure of internal inflation, which largely counteracts the incentives to increase production arising from high world prices. These factors tend,

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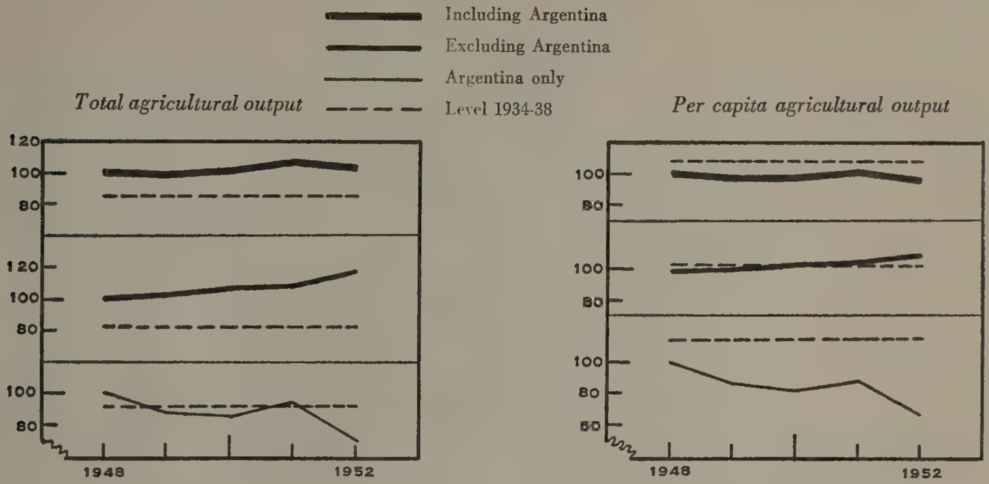
[3] In addition, in the case of Brazil, certain export commodities have met with difficulties due to the maintenance of an exchange rate which does not represent the true purchasing power of Brazilian currency.

Plate 38

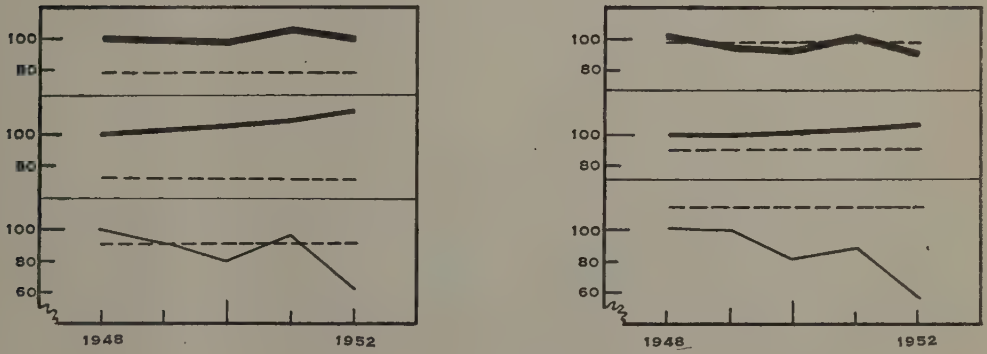
INDICES OF AGRICULTURAL OUTPUT IN LATIN AMERICA, 1934-38 AND 1948-52

1948 = 100



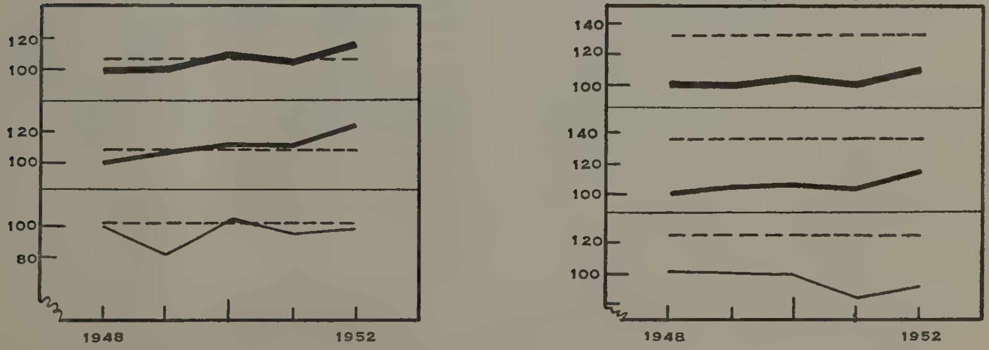
Total agricultural output

Per capita agricultural output



Total foodstuffs

Per capita foodstuffs



Total of remaining products

Remaining products, per capita

Table 128. Latin America: Quantum of agricultural production [a]

(1948 = 100)

	Including Argentina					*Excluding Argentina*				
	1934–38	*1949*	*1950*	*1951*	*1952*	*1934–38*	*1949*	*1950*	*1951*	*1952*
Wheat	87	88	84	93	55	70	108	97	103	111
Maize	113	92	78	94	92	92	104	107	114	117
Rice	46	108	116	122	117	47	109	116	122	115
Other cereals [b]	78	89	73	107	62	89	116	118	118	126
Roots and tubers [c]	63	103	102	106	102	63	105	101	199	104
Dried vegetables [d]	76	105	108	110	104	77	105	108	109	104
Edible oilseeds [e]	52	113	102	118	118	80	115	123	129	154
Sugar	55	94	95	101	117	54	94	95	101	117
Cacao	116	120	127	105	129	116	120	127	105	129
Bananas	75	103	110	115	117	75	103	110	115	117
Meat [f]	86	103	109	110	104	88	100	110	111	113
Total foodstuffs	78	99	98	105	100	72	102	105	109	115
Foodstuffs per capita	98	97	94	99	92	91	100	101	103	106
Coffee	122	103	105	104	112	122	103	105	104	112
Other stimulants [g]	79	91	98	93	98	81	94	94	96	90
Total stimulants	107	99	102	100	107	111	100	102	102	106
Stimulants per capita	135	97	98	94	99	140	98	98	96	98
Linseed	178	55	74	65	44	70	120	76	92	123
Other industrial oilseeds [h]	67	98	92	90	94	69	96	89	87	90
Total industrial oilseeds	141	69	80	74	59	69	100	85	87	95
Industrial oilseeds per capita	178	68	77	70	54	86	98	82	82	88
Cotton	103	130	147	141	173	109	135	146	147	178
Wool	82	94	100	99	106	86	96	108	109	121
Hard fibres [i]	73	114	109	122	119	75	118	108	121	115
Total fibres	95	112	127	127	152	105	118	132	138	168
Fibres per capita	119	110	122	119	141	131	119	127	130	150
TOTAL AGRICULTURAL PRODUCTION	85	99	101	106	104	82	103	107	109	117
AGRICULTURAL PRODUCTION PER CAPITA	107	97	97	100	96	102	101	102	103	108

Sources: The production figures used in this study differ in three aspects from those published in reports and yearbooks of the Food and Agriculture Organization of the United Nations: (1) When the agricultural and calendar years do not coincide figures are given for the year of harvest, because production of the Southern Hemisphere is of greater importance to ECLA reports; in other words, "Agricultural year 1951–52" is considered as 1952. It should be noted that the practice followed in this study is the same as that of publications in Brazil, Uruguay and other countries; (2) data are included for the twenty Latin-American countries except Bolivia and Haiti (which is only considered for coffee and sugar), since complete statistics are lacking and also excluding non-self governing territories of countries outside the region; and (3) an attempt has been made in this study to use, in every case, series which contain the latest revisions of information previously published by governments; this is particularly the case of Argentina, Brazil, Chile, and Mexico. The names of the principal publications and organizations providing these data are given below:

Argentina, Síntesis Estadística Mensual de la República Argentina, Ministerio de Asuntos Técnicos, Presidencia de la Nación, 1947–53; *Brazil*, Produção Agricola, Ministério da Agricultura, Serviçio de Estatística da Produção (Orgão do Instituto Brasileiro de Geografía e Estatística; *Chile*, Estadística Chilena, Dirección General de Estadística and Boletín de Informaciones Agropecuarias. Dirección General de Agricultura; *Colombia*, Economía Agrícola de Colombia, Apéndice Estadístico del Informe de la Misión Currie and Boletines del Ministerio de Agricultura; *Cuba*, Anuario Azucarero, Comisión de Propaganda y Defensa del Tabaco Habano, and Instituto Cubano de Estabilización del Café; *Ecuador*, Dirección Técnica de Agricultura, el Ecuador en Cifras and Banco Central; *Mexico*, Dirección de Economía Rural de la Secretaría de Agricultura y Ganadería and Informe de la Comisión Mixta del Gobierno de México y el Banco Internacional de Reconstrucción y Fomento, 1952; *Paraguay*, Boletín Estadístico del Banco de Paraguay and information from STICA; *Peru*, La Renta Nacional del Perú, 1951, Banco Central de la Reserva del Perú and data from SCIPA; *Uruguay*, Recompilación de la Estadística Agropecuaria 1950, and Boletines del Ministerio de Ganadería y Agricultura, Dirección de Agronomía, Sección Economía y Estadística Agraria; *Venezuela*, Cuadernos de Información Económica de la Corporación Venezolana de Fomento and Boletín del Banco Central de Venezuela.

When annual figures, or those for the most recent data, were lacking, private estimates which appeared in non-official documents were used.

[a] The total indices in table 128 differ from those published previously by FAO both in size, since they cover 40 products and not 30, and in weighting, which was based on 1948 prices.

[b] Oats, barley and rye.

[c] Potatoes, manioc and sweet potatoes.

[d] Kidney beans, peas, lentils, cow peas and broad beans.

[e] Cottonseed, sunflower seed, peanuts and sesame.

[f] Extraction figure (slaughterings plus exports minus imports) for cattle, sheep and pigs.

[g] Tobacco, wine, yerba maté and tea.

[h] Castor oil, babassu and oiticica.

[i] Hemp, sisal, formio and agave.

moreover, to curb developments in the composition and structure of land tenancy, the traditional relationship between capital and labour and the attitude towards these problems prevailing in some quarters. This last is of considerable importance, since it is also the opinion of those who maintain that subsistence farming possesses certain advantages and that a policy of conservation favourable to the development of small family holdings should be followed.

Finally, the growth of domestic consumption arising from increases in real income—the fixed objective of development, in view of the low levels of consumption of the greater part of the population in Latin America—tends to reduce the volume of agricultural products available for export, to such a degree that, in order to maintain them at the pre-war level, the countries concerned will have to make much greater productive efforts than were necessary during the earlier period.

2. PRESENT POSITION OF AGRICULTURE

(a) *General outline*

The downward trend of production, evinced by aggregate statistics for the region, is determined mainly by the influence of cereals in Argentina and coffee in Brazil. Total agricultural production for 1952 was 2 per cent less than in 1951, a mere 4 per cent more than in 1948 (the base year taken for the following calculations), and only 22 per cent greater than before the war, as represented by the period 1934-38 (see table 128 and plate 41). With a population growing at the rate of nearly 2 per cent annually, per capita production thus shows an almost continuous decline. In 1952 Latin-American agriculture produced 4 per cent less foodstuffs and raw materials per capita than in the previous year, or in 1948. If the comparison is made with the period immediately prior to the war the per capita decrease is in the neighbourhood of 10 per cent.

This situation in the agricultural sector of the Latin-American economy has mainly affected exportable surpluses (especially those of foodstuffs and commercial oilseeds) and has continued to be reflected in the foreign trade in these products. In spite of important increases shown in the price indices of exports, and of the continued growth of real income in the United States and the United Kingdom (traditionally the principal purchasers), total Latin-American agricultural exports in 1951, expressed in terms of 1948 prices, were only 88 per cent of the 1948 figure and 73 per cent of that for 1937 (see table 129). In accordance with the provisional agricultural production indices for 1952, it is to be expected that the volume of exports will register a new and pronounced contraction. Exports of wheat may be taken as practically nil, and those of maize, linseed and meat considerably diminished, in relation to the already low levels of 1951, on account of the destruction caused by drought in the River Plate area. A slight rise in cotton and banana exports may be forecast, due to the productive increase of the former in Brazil and the latter in Ecuador. Similarly, a substantial improvement in wool exports is anticipated, by reason of the accumulated stocks of the previous season and of sugar, because of the very large Cuban crop. The principal remaining exports, including coffee, are expected to remain at practically the same level. Under these circumstances, the quantum of Latin-American agricultural exports for 1952 was barely 75 per cent of the 1948 figure and 62 per cent of the pre-war total.

Table 129. Latin America: Quantum and prices of agricultural exports and real income in the United States and the United Kingdom

(1948 = 100)

Year	*Volume exported* [a]	*Export prices* [a]	*Real income United States*	*Real income United Kingdom*
Pre-war (1937)	120	31	57	84
1947	101	88	96	98
1948	100	100	100	100
1949	89	98	98	104
1950	94	111	107	106
1951	88	137	115	101

Sources: The series on quantum and prices have been drawn up based on official statistics. The series on real income was calculated using data published by the International Monetary Fund.

[a] Includes exports of coffee, cacao, linseed, linseed oil, wheat, wheat flour, rice, maize, bananas, sugar, cotton fibre, wool, beef and hides.

In addition to the fall in production, other factors, particularly in the rapid growth of the population, the rise in the level of income, resulting from the improvement in the terms of trade in the majority of the Latin-American countries, and the high degree of activity in other sectors of the economy, have caused an increase in the domestic demand for foodstuffs and textile fibres, thus limiting still further the exportable surpluses of agricultural products. For example, meat consumption in Argentina between the pre-war years and 1951 rose by 400,000 metric tons, and that of wheat by 560,000, while the production of the former increased by only 166,000 tons and in the case of the latter actually decreased by more than a million tons. In Brazil, despite the fact that wheat production increased with great rapidity during this same period, the expansion was not even sufficient to balance the increase in consumption. While production rose from 144,000 to 423,000 tons (an increase of 279,000), consumption grew from 1,140,000 to 1,700,000 tons (an increase of 560,000). In Peru, whereas sugar output grew by 80,000 tons and that of cotton by 1,400, consumption of the former rose by 106,000 and that of the latter by 5,400 tons.

In most of the countries concerned—especially in those which have traditionally been net importers of foodstuffs—the increases in consumption have not been covered by domestic production. This is due, in certain cases, to the fact that production has risen at a slower rate of growth than the population; in others, to the fact that the development of production has not kept pace with the effective demand created by the rising level of incomes and greater urbanization. In other cases still, the gap is due to the diversification of food supplies by articles which cannot be produced economically within the country. Under these conditions, the volume of foodstuffs imported into Latin America continued to increase rapidly, until in 1951 it was 36 per cent greater than in 1948 and more than double that of 1937. Three countries—Brazil, Cuba and Venezuela—accounted between them for 59 per cent of the total volume of foodstuffs imported into the region in 1948 and 67 per cent in 1951 (see table 130).[4]

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[4] The indices given in this table (the main constituent of which is wheat) also include other foodstuffs, beverages and stimulants.

Table 130. Latin America: Quantum of imports of foodstuffs, beverages and stimulants for selected countries

(1948 = 100)

Country	*Pre-war (1937)*	*1947*	*1949*	*1950*	*1951*
Argentina	..	89	60	47	54
Bolivia	53	93	90	91	95
Brazil	80	111	121	159	186
Chile	71	107	92	104	109
Colombia	80	141	75	146	137
Cuba	75	117	114	127	134
Ecuador	70	112	108	109	153
Mexico	29	131	94	135	184
Peru	..	93	124	155	184
Uruguay	..	137	94	95	97
Venezuela	17	81	100	125	123
TOTAL OF THE ABOVE COUNTRIES	67	107	103	125	136

Source: ECLA, based on data noted in sources to table 128.

Rising domestic demand has compelled the Latin-American countries to utilize foreign exchange for the purchase of non-durable consumer goods, although such reserves could otherwise have been absorbed by capital goods imports essential to accelerate economic development. Owing to the situation of production described above, the problem assumes an even more critical aspect, since a number of leading South American countries, which formerly obtained their food supplies from Argentina, were forced to import foodstuffs from other sources. Part of the acute dollar shortage in Brazil was caused by wheat purchases at the free market rate, over and above the quota allocated under the International Wheat Agreement.

In 1952, Argentina's production of foodstuffs and raw materials stood at 70 per cent of the 1948 level and 76 per cent of the pre-war volume. Expressed in per capita terms, these represent 64 per cent and 56 per cent respectively. On the other hand, in 1952, the rest of the countries produced 17 per cent more than in the base year, and 43 per cent more than in the period immediately preceding the war; in per capita terms the increases are 8 per cent and 6 per cent respectively. The main increments in agricultural production were recorded in Mexico, where the 1952 indices show a rise of 16 per cent in relation to 1948; in Brazil, where the corresponding increase was 19 per cent; in Cuba, where the large sugar crop also caused a 19 per cent rise; and in Uruguay, where there was a 26 per cent improvement. There were also gains in the smaller countries, especially some of those in the Central American area. In contrast, the small increases in production recorded in Chile and Paraguay were not sufficient to balance the rise in population.

Amongst the different products, an upward tendency may be noted in the case of cotton, rice, edible oilseeds, sugar and bananas, while cereals (excluding rice) and linseed show a trend in the opposite direction. Meat is losing ground; coffee is only just beginning to show signs of reaching pre-war levels, and the remaining items show no definite movement worthy of comment (see table 128).

An important positive aspect of Latin-American agriculture is the relative price level of agricultural products, which has continued to improve since before the war, though there has been a recession since the end of 1951. Relative prices improved mainly in the case of export products of tropical origin. By virtue of the pronounced increase in prices, and in spite of the downward trend in the volume of exports, their current value went on rising continuously up to 1951, and remained at a high level during 1952. This circumstance has helped to maintain a high degree of economic activity in Latin America. Nevertheless, there can be little doubt that the situation is precarious, since any decline in prices would have serious repercussions, especially if the prevailing structure of costs is taken into account.

(b) *Causes of the decline in Argentine production*

The spectacular fall in the production of cereals and meat in Argentina has dislocated the economies of both that country and others in the South American region which were traditional purchasers of Argentine foodstuffs, and which had to find other sources of supply. The position with regard to cereals and linseed is particularly serious. Last season, Argentina produced only 45 per cent of the cereals harvested the previous year, equivalent to 37 per cent and 35 per cent respectively of the 1948 and pre-war crops. On the other hand, the rest of the Latin-American countries have continued to increase their production, especially in maize, rice and wheat, and in 1952 produced 15 per cent more than in 1948 and 55 per cent more than in the period 1934-38. As regards linseed, Argentine output has fallen from 1,700,000 tons pre-war to 300,000 in 1952, whereas that of the other South American producers of lesser importance has maintained an upward trend, rising from 77,000 to 125,000 tons in the same period. Mexican production in particular has expanded rapidly from an average of 3,000 tons in 1934-38 to 66,000 in 1952.

The decline in cereals and linseed has undoubtedly been the strongest factor in contracting aggregate Latin-American production, since these products, together, form a weighty element in the quantum indices. In 1938, for example, they represented about 30 per cent of the value of all the items.

The decline in Argentina's 1952 production of flax, cereals and meat was the direct consequence of the prolonged drought which affected the richest agricultural areas of the country during the 1950-51 and 1951-52 seasons.[5] During the latter period, hot winds and an increase in the hours of sunshine accompanied the persistent drought, causing heat waves of a type which had not been experienced since 1925. These climatic conditions greatly affected crops, pasture and livestock.

Many cereal crops were lost through lack of water, while others were burnt dry by the heat-waves. Apart from these climatic obstacles, however, farmers had to turn over part of their arable area to grazing in order to avoid further losses in their herds. The proportion of area sown to area harvested was only 49 per cent, the smallest ever recorded in Argentina.

The downward trend in Argentine grain production cannot, however, be attributed solely to unfavourable climatic conditions. The actual area sown with cereals and flax has also continued to decrease since before the war. This may indicate either a physical impossibility on the part of the farmers to plant them, or a lack of incentive to do so. The most probable explanation is a combination of the two.

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[5] To illustrate the position, according to official estimates, during the 1951-52 season more than 1 million hectares of wheat were prepared above the registered total (4.8 millions), but which could not be sown owing to the drought.

The migration of a large number of rural workers to the towns, caused by the intensive programme of industrial development, has withdrawn a large part of the skilled labour from Argentine agricultural areas; this man-power has not yet been replaced by machinery. Of the 27,500 tractors which, in 1950, it was thought essential to import in order to enable the grain equipment to deal with a volume of production similar to that of the pre-war period, only about 6,600 arrived in 1951.[6] Agricultural machinery imports were accelerated during 1952, rising to 7,300 tractors. However, this figure still does not meet the domestic demand, which according to the Ministerio de Asuntos Técnicos exceeds 8,000 units annually. But the majority of the tractors, harvesters and threshing machines operating on farms are generally antiquated or worn out by excessive use. This situation causes continual and costly repairs, and it is very often difficult to obtain the required spare parts. Similarly, it should not be overlooked that a sufficient supply of fuel has also been a serious obstacle for Argentine farmers.

Table 131. Argentina: Purchasing power of cereals at the fixed official prices

(1948 = 100)

Year	*Price of cereals* [a]	*Cost of living* [b]	*Purchasing power of cereals*
1948........	100	100	100
1949........	110	131	84
1950........	119	165	72
1951........	158	225	70
1952........	184	285 [c]	64

Source: Síntesis Estadística Mensual de la República Argentina and Instituto Argentino para la Promoción del Intercambio.

[a] Indices of the official prices established for wheat, flax, maize, oats, barley, rye and sunflower. Average of the production for 1948–52 used in the weightings.

[b] Official Cost of Living Index published in *Síntesis Estadística Mensual de la República Argentina.*

[c] Partially estimated.

The purchasing power of cereals has continued to decrease persistently, until in 1952 it was only 64 per cent of the figure in 1948.[7] In 1948, the relative exchange values of cereals were at levels similar to those of 1937-38, when Argentina produced its best crops. If this phenomenon is considered in conjunction with the lowering of production, it may be concluded that Argentine grain producers have continued to suffer a constant decrease in their real income, and that the prices fixed by the government, in spite of the improvement which they initially presented, have not in practice created a sufficient incentive for sowing (see table 131).

Apart from this decrease in real prices, costs have continued to rise, not only on account of the improvement in minimum wages and of other factors affecting agricultural costs of production, but also because of higher transport charges, due to the ban—now lifted—on the use of private transport, together with the delays caused by inspection and trans-shipment resulting from this restriction.

3. PRINCIPAL FLUCTUATIONS IN SELECTED PRODUCTS

(a) *Coffee*

Coffee continues to be one of the main sources of income for the region. Prices remained fairly stable after reaching peak levels at the beginning of 1951, which were the highest ever recorded. The price for Brazilian "Santos 4" (the type of coffee most commonly sold on the world market), during 1951 and 1952, remained at about 1.20 U.S. dollars per kilo ex dock New York, while Colombian "Manizales" (one of the best commercial qualities) maintained a price of about 1.28 U.S. dollars per kilo up to the third quarter of 1952, since when it has fallen slightly (see table 132). Hence, total earnings from coffee exports, which were only 245 million dollars in 1937, rose to 868 million dollars in 1948 and 1,739 million in 1951.

Table 132. Prices of "Santos 4" and "Manizales" coffee, ex dock, New York

(Dollars per kilogramme)

Period	*Santos 4*	*Manizales*
Pre-war (1934–38)........................	0.17	0.26
1950—30 June........................	1.05	1.14
1951—1st quarter.....................	1.21	1.31
2nd quarter.....................	1.19	1.29
3rd quarter.....................	1.18	1.27
4th quarter.....................	1.20	1.30
1952—1st quarter.....................	1.20	1.27
2nd quarter.....................	1.18	1.24
3rd quarter.....................	1.20	1.28
4th quarter.....................	1.19	1.24
1953—15 January.....................	1.19	1.23

Source: Adapted from figures published by the Food and Agriculture Organization's *Monthly Bulletin of Statistics*, vol. 1, No. 5, Sept. 1952; *Mercado de Café*, Weekly Bulletin of the Pan-American Coffee Bureau, New York.

Prospects of present price levels being maintained are very encouraging; in fact, according to the latest estimates of the Pan-American Coffee Bureau, world production for export in 1951-52 was 1,790,000 tons, while world consumption, for the calendar year 1952, was calculated at 1,890,000 tons. The deficit of approximately 100,000 tons can, however, be covered by drawing on both the small stocks from the previous crop held by exporter countries and the reserves of importing countries, so that supply and demand can be considered to be more or less in balance for the time being.

In addition, the position of Brazilian coffee, which largely determines world prices for the commodity under conditions of free competition, also favours the continuance of the peak period. Stocks of Brazilian coffee available at the end of February 1952 amounted to 400,000 tons, of which 202,000 represented stocks at ports, and 198,000 were awaiting transport in the interior of the country.[8] These figures are very much lower than the stocks available, at the corresponding date, during the last few years. Moreover, initial estimates of the Coffee Statistics Department indicate that the commercial crop for 1952-53 will amount to barely 951,000 tons. If it is considered that of this total 100,000 tons will have to be withdrawn for current reserves, consumption at port and the coastal trade, the conclusion is reached that exports of the 1952-53 crop will barely exceed 850,000 tons, and will thus be one of the smallest of recent years.

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[6] Yearbook of the Sociedad Rural Argentina, 1951.

[7] The price ratio for cereals given here was calculated without taking into consideration a number of factors which intervene in determining the farmer's purchasing power, such as partnership costs, sales of improved seeds, etc. But allowance has been made for other factors which do not affect farmers and urban dwellers in the same way, such as rents, electricity and so on. The indices do not aim at providing an accurate measurement of the phenomenon, but only to indicate a tendency.

[8] Data supplied by the *Secretaría de Fazenda do Estado de São Paulo.*

The world trade in coffee thus continues to be based, fundamentally, on the supplies which each annual crop provides. The lack of statistics precludes any accurate estimate of the degree to which high prices have stimulated the opening up of new plantations. At all events, it is hardly four years since the recovery in coffee prices took place, and it takes five years before new trees begin to bear. Nevertheless, even assuming that from the earliest period of the rise in prices a high rate of planting was thus stimulated, it may be expected that the present ratio between supply and demand will be maintained for some time further. However, recalling the disastrous experience of the great depression and the years following it, cultivators would need a relatively long period of high prices before deciding to establish new plantations.

In spite of these last remarks, frequent reference is made to the extremely rapid expansion of the coffee plantations in the West-Central zone of Brazil, especially the northern area of the State of Paraná. The implication is that these new plantations could, within a relatively short time, cause a new period of world coffee over-production. Neither official figures nor complete information on these new plantations and their dates for coming into production are yet available, but according to the most reliable estimates available,[9] Brazil suffered a net loss between 1940 and the end of 1950, of about 390 million coffee bushes, reducing the grand total from 2,782 million to 2,392 million bushes. The losses occurred mainly in the State of São Paulo, where stocks diminished by 214 million bushes, followed by relatively smaller decreases in the states of Bahía and Pernambuco.

Unofficial sources [10] estimate that some 200 million coffee bushes have been planted recently in Brazil, more than 90 per cent of them in the north of Paraná, and the rest mainly in the south of the state of Goiás. As may be inferred from these data, it is doubtful whether the new Brazilian plantations will ever succeed in replacing the losses in old coffee bushes, especially in the eroded areas in the state of São Paulo. Even assuming that high prices, as well as new irrigation techniques, the use of fertilizers and anti-erosion measures, will maintain the São Paulo production at its present level, and that the rate of planting in the new coffee areas will continue at the same speed as previously, a comparatively long interval must elapse before the production of Brazilian coffee output is able to rise appreciably and a period of possible over-production is reached.

It should, however, be pointed out that the prospects for future expansion in the states of Paraná and Goiás are of considerable importance. According to the source already quoted,[10] in northern Paraná alone there are 6 million hectares of tropical forest land suitable for coffee, consisting of 4 million hectares of sandy-loam soils and 2 million hectares of dark violet basaltic soils, similar in quality to those which formed the basis for the remarkable coffee development in the State of São Paulo.

The area suitable for coffee—without having to encroach on poor soils or areas too precarious by reason of frosts —would allow Paraná to plant and maintain in production no less than 1,000 million bushes, in other words, as many as there are in São Paulo at present. Higher yields from the young plantations, together with the fact that a considerable number of old bushes are withdrawn from production annually in São Paulo, thus intensifying the need for suitable new zones, would make the State of Paraná the principal coffee area of Brazil. At the same time the tendency towards the diversification of agricultural production in São Paulo leads to a belief that the importance of coffee in this state may tend to diminish in the future. At present, there are some 500 million bushes planted in the new zones of Paraná, about half of which are in production, and the remainder will begin to produce coffee by degrees during the course of the next five years. The output from this state has risen from an average of 36,000 tons in 1942-46 to 216,000 tons in 1952.

The expansion of the coffee areas in Brazil is proceeding with the same primitive methods as the opening up of the São Paulo zone. The forests are cut down and burnt, following which the coffee seedlings are planted among the mass of tree-trunks not destroyed by the fire, which lie on the ground until they rot. Furthermore, in spite of the efforts of the Companhia de Terras do Norte de Paraná and the government, no diversification of crops is being carried out.

Information is equally scarce regarding the expansion of coffee plantations in other areas of Latin America as a result of the rise in prices. Unofficial sources estimate that, within five years, crops of about 36,000 tons annually may be anticipated from the Dominican Republic,[11] as a result of the government development programme. Production for Colombia and Mexico shows a marked tendency to increase, but no data concerning new plantations are available for the last few years, although in Mexico 5,000 hectares at least have been placed in cultivation since 1950. In El Salvador, where land suitable for the cultivation of coffee is almost all under crop, and where the actual cultivated area could not be expanded more than 17 per cent, improved prices have somewhat intensified existing cultivation, by means of the replacement of deep-pruning of the old coffee bushes. This fact, in addition to adverse climatic conditions in 1950 and 1951, caused a temporary decrease in the crop, which fell from 80,000 tons in 1949 to 66,000 in 1951. In 1952, however, there was a marked tendency towards recovery with a crop of 74,000 metric tons.

Coffee cultivation requires a substantial labour force. Recent surveys [12] have shown that both in Colombia and Costa Rica, man-power is the leading cost factor in coffee production, accounting for 65 to 75 per cent of the total cost. For countries which depend almost exclusively on coffee exports as the driving power behind their development, this constitutes a serious problem, since even the present high level of prices leaves only a very narrow margin for wages, which are therefore low in this basic

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[9] Superintendencia dos Serviços do Café, Secretaría de Fazenda do Estado de São Paulo.

[10] See the series of articles written by Mario Mazzei Guimaraes on the extension of agriculture in the west-central zone of Brazil, in the newspaper *Folha da Manha.*

[11] In 1949 this country succeeded in producing 28,000 tons, but the average for the last five years was 22,000 tons.

[12] See Inter-American Institute of Agricultural Science, *Information Bulletin,* No. 41, Turrialba, Costa Rica, March 1952.

Table 133. Latin America: Production, exportable production, stocks, exports and prices of coffee

	Pre-war [a]	*1948*	*1949*	*1950*	*1951*	*1952*
(1) *Production* (thousands of metric tons)						
Brazil	1,461	1,037	1,068	1,071	1,080	1,157
Colombia	261	368	369	338	350	344
Total for Latin America	2,067	1,701	1,744	1,779	1,764	1,889
(2) *Exportable production* [b] (thousands of metric tons)						
Brazil	1,304	852 [c]	..	897	942	952
Colombia	252	326 [c]	..	312	285	336
Total for Latin America	1,930	1,448 [c]	..	1,442	1,519	1,593
Total for world	2,101	1,726 [c]	..	1,759	1,823	1,792
(3) *Stocks in ports at end of February* (thousands of metric tons)						
Brazil	..	..	530	529	460	400
(4) *Current value of exports* [d] (millions of dollars)						
Brazil	148	487	627	859	1,051	1,038
Colombia	56	225	242	308	382	380
Total for Latin America	245	862	1,041	1,425	1,708	1,771
(5) *Quantum of exports* [d] (1948 = 100)						
Brazil	69	100	111	85	93	90
Colombia	75	100	97	80	86	90
Total for Latin America	77	100	106	88	94	96
(6) *Price index* (1948 = 100)						
Total for Latin America	41	100	114	187	211	215

Source: Production; see table 128; exportable production, *Pan-American Coffee Bureau, Coffee Statistics Nos. 14 and 16; Exports,* Official Foreign Trade Yearbooks.

[a] Average of 1937–38 for production; average of 1936–40 for exportable production, and 1937 for remaining cases.

[b] Exportable quantum after deducting domestic consumption.

[c] Post-war period: average for 1946–50.

[d] Exports actually made.

activity. Furthermore, in centres such as the State of São Paulo, where there is a strong tendency towards the diversification of agriculture and industrialization, this difficulty reduces the power of coffee to compete for cheap labour and to retain its place as the principal activity in these zones.

(b) *Cereals*

Cereals constitute a group of products which have exerted the greatest influence on the fall in over-all agricultural production indices (see table 128). The decline has taken place through the influence of Argentina, which counteracted both the continuous expansion experienced in the rest of the Latin-American countries and that of one of the components of the group—rice—production of which has continued to increase even in Argentina.

However, the present development programmes encourage the expectation of considerable increases in production. In Argentina, targets have been established for the areas to be sown with all types of grain in 1957; in Brazil, Guatemala and Peru wheat cultivation is being developed; Mexico is continuing with the expansion programme for maize and wheat; and, lastly, in Cuba, Paraguay and Venezuela, measures for obtaining an increase in the production of rice are being applied.

(i) *Wheat.* The 1952 Latin-American wheat crop was the smallest for many years and represented only about 63 per cent of the pre-war level. Argentina harvested 2 million tons as against over 6 million before the war, whereas the remaining countries produced about 3 million tons in comparison with an average tonnage of 1.9 million in the pre-war period.

The meagre Argentine harvest was insufficient to supply the consumption and seed requirements of the country itself. In these circumstances the government was forced to adopt a series of measures to make the fullest possible use of the available grain. Thus, wheat exports were suspended and millers were obliged: to manufacture only one type of flour; to raise the extraction proportion to 85 per cent; to accept, for milling, wheat normally classified as only fit for animal feeding-stuffs; and lastly, to add 10 per cent millet or maize meal to the wheat flour. In addition, the export of millet was prohibited; bakeries were authorized to use certain chemical products in the making of bread; the selling of flour to housewives was limited; the official price of bread was increased, and special legislation was enacted to prevent the smuggling of wheat and flour to neighbouring countries. In spite of all this, Argentina had to import wheat to supply its deficiencies until the next crop was available. On 23 July 1952, the Instituto Argentino de Promoción del Intercambio signed a contract for the exchange of 200,000 tons of wheat from the United States for 260,000 tons of Argentine maize, which were exported from Argentina to France on behalf of the United States.

In Chile also, there have recently been difficulties regarding the wheat supply. Production of this cereal has never returned to the levels attained in 1948 and 1949, when it exceeded a million tons. The reasons appear to have been a decrease in the area sown accompanied by

Table 134. Latin America: Production, exports and prices of wheat

Year	Production and exports (1948 = 100)			Production (thousands of metric tons)		
	Volume produced	*Volume exported*	*Export prices*	*Latin America*	*Argentina*	*Other countries*
Pre-war [a]	87	180	21	8,000	6,127	1,873
1947	84	102	72	7,661	5,615	2,046
1948	100	100	100	9,165	6,500	2,665
1949	88	89	71	8,082	5,200	2,882
1950	84	124	38	7,728	5,144	2,584
1951	93	115	44	8,535	5,796	2,739
1952	55	10	54	5,014	2,100	2,914

Source: Official publications and ECLA.
[a] Average of 1934–38 for production, and 1937 for exports and prices.

smaller yields. Whereas in 1948 and 1949, 819,000 and 867,000 hectares respectively were sown, with a yield of 13.1 and 12.8 metric quintals per hectare, in 1951 and 1952, 816,000 and 792,000 hectares were planted, providing 11.9 and 12.3 metric quintals respectively. These losses may be attributed to unfavourable climatic conditions and the appearance of new strains of rust which attacked the varieties under cultivation and nullified both the favourable effects of better seeds and the employment of larger quantities of fertilizers.

In Uruguay, the crisis in wheat production which occurred between 1944 and 1947 has not been repeated. From that period onwards this country, which has continued to subsidize the production of wheat, has obtained crops sufficient for domestic consumption and for the export of small quantities, mainly to Brazil.

Mexican production of wheat has continued, with some fluctuations, at an average of more than 500,000 tons per annum. The 1952 crop, estimated at about 600,000 tons, satisfied only 80 per cent of domestic consumption. For 1953, the government is trying to produce the greatest possible amount within the country, with the object of reducing imports. It is proposed to obtain this increase by substituting wheat for cotton, in spite of the high cost of producing wheat under irrigation in Mexico.

Brazil has continued to operate a vigorous wheat development programme in Rio Grande do Sul, which has raised production from 144,000 tons in 1934-38 to 587,000 tons in 1952. However, serious difficulties in continuing this expansion have been encountered, since the marketable varieties of the grain harvested represent only a very low proportion of the total crop, while yields continue to decrease as the producing areas are extended beyond the original centres. Although these problems can undoubtedly be overcome through seed selection and the use of fertilizers, they may well cause a considerable setback to the Brazilian programme.

The poor Argentine crop of 1952 reduced South American exports of wheat to practically nil. As already explained, this affected the estimated availability of foreign exchange, not only in Argentina but also in the countries which normally imported Argentine wheat. Up to 1945, the wheat importing countries of South America were almost completely supplied by Argentina. Thus, from 1946 to date (discounting 1952, when Argentina exported practically no wheat at all), these countries have had to look elsewhere for 50 per cent of their requirements.

(ii) *Maize.* The 1952 Latin-American maize harvest was also the smallest since before the war, with the one exception of 1950, when the Argentine crop was almost entirely lost. As in the case of wheat, the 1952 reduction occurred because of the drought which ruined the crop in Argentina, and in spite of an increase in production in the other countries. Between the pre-war era and 1952, Argentine production declined from 8.2 million tons to 2 million, while that of Brazil rose from 5.7 million to 6.2 million tons and that of the remaining countries from a tonnage of 4.5 million to 6.8 million (see table 135).

In addition to the factors mentioned previously as causes of the decline in Argentine grain production, it should be noted that there has also been a decrease in maize productivity, comparable to that of wheat. During the last fifteen years wheat yields in Argentina have risen

Table 135. Latin America: Production, exports and prices of maize

Year	Production and exports (1948 = 100)			Production (thousands of metric tons)			
	Volume produced	*Volume exported*	*Export prices*	*Latin America*	*Brazil*	*Argentina*	*Other countries*
Pre-war [a]	115	345	22	18,472	5,720	8,234	4,518
1947	102	96	87	16,635	5,502	5,815	5,318
1948	100	100	100	16,368	5,607	5,200	5,561
1949	92	46	71	15,020	5,449	3,450	6,121
1950	78	31	54	12,808	6,023	836	5,949
1951	94	22	89	15,373	6,218	2,670	6,485
1952	92	26	105	15,060	6,245	2,040	6,775

Source: ECLA, based on data noted in sources to table 128 of this part.
[a] Average of 1934–38 for production, and 1937 for exports and prices.

Table 136. Latin America: Production, exports and prices of rice[a]

Year	*Production and exports*			*Production*		
	(1948 = 100)			*(thousands of metric tons)*		
	Volume produced	*Volume exported*	*Export prices*	*Latin America*	*Brazil*	*Other countries*
Pre-war [b].....	46	10	27	1,842	1,232	610
1947.........	96	98	94	3,820	2,596	1,224
1948.........	100	100	100	3,972	2,554	1,418
1949.........	108	16	84	4,316	2,720	1,596
1950.........	116	54	68	4,604	3,218	1,386
1951.........	122	47	74	4,838	3,237	1,601
1952.........	117	..	..	4,610	3,033	1,577

Source: ECLA, based on data noted in sources to table 128.

[a] Unshelled rice.

[b] Average for the years 1934–38 for production, and 1937 for exports and prices.

from 8.56 metric quintals to 11.30 metric quintals per hectare, whereas maize has fallen from 18.34 to 16.80 metric quintals per hectare. Thus, even although the price of maize amounted to 90 per cent of that of wheat (fifteen years ago it was only 66 per cent), the value per hectare of wheat has risen more rapidly, bringing about an increase in the sowing of wheat in zones previously devoted to maize.

In Mexico and the Central American countries, maize is the basic foodstuff, and usually absorbs a greater amount of labour than any other product. It is the characteristic crop of small-scale farming and a large proportion is planted entirely for home consumption. The available statistics disclose production increases for 1952 in practically every country in this area.

In Guatemala, where the cultivation of maize in the age-old agriculture of the highlands uses up a large amount of manpower but obtains low yields, substantial efforts are being made to relocate production by transferring it to the coastal plains, where machinery can be used.

Maize exports from Latin America in 1952 seem to have afforded one of the smallest sources of foreign exchange from the sale of this crop in recent years, not merely because of the poor Argentine harvest, but also since a large part of the maize exports from this country were offset by corresponding imports of wheat.

(iii) *Rice.* Rice production has followed a trend diametrically opposed to that of the other cereals, even in Argentina, where the 1952 rice harvest was the best ever recorded.

The total Latin-American crop for 1952 was slightly smaller than that of 1951, on account of the contraction in the area planted in Brazil, but it still remained at a very high level as compared with the pre-war period (see table 136).

Brazil, the main producer and where less than a million hectares were sown before the war, has cultivated about 2 million hectares since 1950 and is harvesting more than 3 million tons of unshelled rice annually. The principal rice area is in the State of São Paulo. However, the rice area has recently been moving in the direction of new lands brought into commercial cultivation in the west-central zone of Brazil, rendering the supply of the city of São Paulo itself more difficult. In 1951, the problem became serious and compelled the authorities to draw upon government rice reserves in Goiás and the south of Minas.

Exports of rice from Ecuador in 1951, which stood at only 5,000 tons, can be regarded as the lowest during the last ten years. The causes of the decrease were the smaller areas sown and the low yields occasioned by unfavourable climatic conditions. Ecuador's 1952 production is estimated at 104,000 tons of unshelled rice, of which it is hoped to export 21,000 tons in the form of polished rice.

Cuba has quadrupled its rice production in the last ten years. Although part of this remarkable increase is due to the extension of the area under cultivation, the principal improvement stems from the higher yield, which has doubled in the last decade through the use of irrigation and agricultural machinery. The area under rice has risen from 28,000 hectares during the war—when Cuba

Table 137. Latin America: Production, exports and prices of cacao

Year	*Production and exports*			*Production*		
	(1948 = 100)			*(thousands of metric tons)*		
	Volume produced	*Volume exported*	*Export prices*	*Latin America*	*Brazil*	*Other countries*
Pre-war [a]...........	116	126	21	224	124	100
1947...............	106	121	75	205	119	86
1948...............	100	100	100	193	97	96
1949...............	120	142	52	232	133	99
1950...............	127	151	77	245	157	88
1951...............	105	118	92	203	121	82
1952...............	129	90	91	250	158	92

Source: ECLA, based on data noted in sources to table 128.

[a] Average of 1934–38 for production, and 1937 for exports and prices.

Table 138. Latin America: Production, exports and prices of bananas
(1948 = 100)

Year	*Volume produced*	*Volume exported*	*Export prices*
Pre-war [a]....	75	84	33
1947	..	95	101
1948........	100	100	100
1949........	103	96	115
1950........	110	93	127
1951........	115	93	134
1952........	117	100	153

Source: ECLA, based on data noted in sources to table 128.
[a] Average for the years 1934–38 for production, and 1937 for exports and prices.

began to increase cultivation owing to the difficulties of obtaining supplies from abroad—to 56,000 hectares in 1952; during the same period production has increased from 32,000 tons to 132,000 tons of rice in the husk. This valuable addition has enabled Cuba to supply a quarter of its domestic consumption and cut down rice imports, which were 70 per cent less during the first six months of 1952 than in the corresponding period of the previous year.

(c) *Cacao*

Latin-American cacao production for 1952, estimated at 250,000 tons, exceeded that of the previous year by 47,000 tons. Although production has risen both in Mexico and in the Dominican Republic, the greater part of this increase is due to Brazil, where climatic conditions were favourable. World production for 1952 was 15.4 higher than in 1951, but still remained 4.6 per cent below that of 1950.

The high level of world consumption in recent years has absorbed practically the entire production and exhausted the reserves. In these circumstances the price has remained five or six times higher than before the war, the peak average price being reached in 1948. During the decline of economic activity in the United States in 1949 the price of cacao fell considerably, and began to improve only towards the end of 1950. In the autumn of 1951, there was a further drop, though prices recovered somewhat during the first six months of 1952 until they very nearly reached the peak United States price of 38.4 cents per pound.

The 1952 Latin-American crop has been good, and forecasts indicate that the African yield will be back to normal, so that the volume available will probably be larger than that of the previous year. The market, however, has begun to show signs of slackness; demand shows no signs of increasing; on the contrary, consumption in the majority of countries is diminishing. In the United States, the seasonal fall in the sales of confectionary during the summer was much more pronounced in 1952 than in 1951. In the United Kingdom, the consumption of cacao during the first half of 1952 was at least 10 per cent below the corresponding period of the previous year, and, moreover, the British Government purchasing offices in Africa established a price 12 per cent lower than in 1951. Again, it appeared that the German market would require considerable quantities of cacao in 1952, but, after a peak period of short duration, purchases diminished substantially.

(d) *Bananas*

This product has continued to play an important role in the foreign trade of various countries. In a number of these, such as Ecuador, its influence is on the increase. With the exception of Brazilian statistics, data on production are meagre, although export figures provide an approximate indication of total output and correspond closely to the commercial production (see table 138).[13] The trends of production amongst the various countries are extremely divergent: while Ecuador, Brazil, Costa Rica, Haiti, Honduras, and the Dominican Republic have increased their exports, those of Cuba, Guatemala, Nicaragua, Mexico and Panama have diminished. Guatemalan production was affected by cyclones in 1949, 1950 and 1951, and by labour disputes in 1952. Panama also suffered the effects of a cyclone in 1952 which destroyed the greater part of its plantations.

Production shows a general downward trend in Central America, with the exception of Costa Rica and Honduras, where new plantations are being brought into production. On the other hand, South American exports have grown mainly due to the substantial expansion of the crops in Brazil and Ecuador. Fostered by the contraction in Central American exports and by the increase in demand in the United States and some of the European countries, Ecuador's banana output has grown to such an extent

Table 139. Latin America: Production, exports and prices of sugar [a]

Year	*Production and exports*			*Production*			
	(1948 = 100)			*(thousands of metric tons)*			
	Volume produced	*Volume exported*	*Export prices*	*Latin America*	*Cuba*	*Brazil*	*Other countries*
Pre-war [b].....	54	47	47	5,461	2,887	753	1,821
1947.........	..	87	116	..	..	..	..
1948.........	100	100	100	10,040	6,057	1,410	2,573
1949.........	93	82	98	9,374	5,226	1,391	2,757
1950.........	95	81	110	9,488	5,558	1,403	2,527
1951.........	102	88	117	10,209	5,759	1,607	2,843
1952.........	119	87	109	11,904	7,167	1,785	2,952

Source: Table 128 and official statistics.
[a] Raw sugar, excluding "panela".
[b] Average of 1934–1938 for production, and 1937 for exports and prices.

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[13] The increase in production shown by the indices in table 138 is mainly determined by Brazil. The export indices reflect the influence of unfavourable climatic conditions and labour disputes in Central America.

Table 140. Latin America: Production, exports and prices of meat

Year	*Production and exports*			*Production*		
	(1948 = 100)			*(thousands of metric tons)*		
	Volume of meat produced [a]	*Volume of beef exported*	*Beef export prices*	*Total Latin America* [a]	*Argentina* [a]	*Other countries*
Pre-war [b].....	86	138	39	4,311	1,971	2,340
1947.........	..	112	83	..	..	..
1948.........	100	100	100	4,994	2,349	2,645
1949.........	103	97	120	5,141	2,408	2,733
1950.........	109	84	99	5,466	2,492	2,974
1951.........	110	77	140	5,496	2,137	3,359
1952.........	104	52	127	5,203	2,074	3,129

Source: ECLA, based on data noted in sources to table 128.

[a] Number of cattle, sheep and pigs slaughtered expressed in terms of dressed meat, including estimates for unofficial slaughtering in Argentina, Chile and Uruguay.

[b] Average of 1934–38 for production, and of 1937 for exports and prices.

that this country, by 1952, had become the world's largest exporter of this fruit.

(e) *Sugar*

The Latin-American sugar crop for 1952 was the largest ever recorded. The main factor in the increase of 1.7 million metric tons over the previous year's crop, which amounted to 10.2 million tons, was Cuban production, showing an improvement of 1,400,000 tons, although there were also substantial productive gains in Argentina, Brazil, the Dominican Republic, Mexico and other countries.

The Cuban cane harvest began in the middle of December 1951 with low sugar yields and, except for the number of hectares planted, gave very little indication of the large amount of sugar eventually harvested. Even in April the official estimates indicated only a small increase on the 6.1 million tons produced in 1948. However, the distribution and intensity of the rains during the first part of 1952 combined with bright, dry weather to advance the crop, causing an increase in the sugar content and enabling the continuous and prolonged operation of the mills.

Fresh problems of surpluses on the world sugar market have thus appeared. Cuba will limit her 1953 crop to 5,152,000 tons, while attempting to obtain international agreement for the adoption of restrictive measures on a world-wide basis. The surplus for 1952 has been calculated at 1,030,400 tons, and the reserve has risen to 1,803,200 tons.

The estimated Mexican production of 700,000 tons for 1952—the 1951 crop was 650,000 tons—is also the highest known, although, since consumption is rising rapidly, at the rate of about 140,000 tons a year, it is likely that production will continue to increase in the immediate future.

The 1952 cane harvest of the Dominican Republic, in spite of the effects of the rains, produced 603,000 tons of sugar, or about 75,000 more than the previous year. As there are plans in this country for an expansion in the mill capacity, production will probably reach 750,000 tons within a few years.

With the suppression of the quotas for sugar manufacture, which had been imposed on the Brazilian mills, the 1952 crop represented a very substantial increase over that of the previous year. The rapid growth of the sugar consumption in Brazil and other countries in the South American area, with the exception of Chile, leads to the hope of a further expansion of the region's sugar industry. This is in spite of the fact that Peru, which has been the main exporter in the southern zone, has maintained production at practically the same level for the last ten years owing to limitations both in the availability of land and the production of guano fertilizer.

(f) *Meat*

Unofficial sources [14] estimate that the livestock population of Latin America reached one of the highest levels ever recorded during the years 1951 and 1952. Stocks of cattle comprised about 158 million head, as compared with 150 million in 1948, and 127 million in the pre-war period. The number of sheep (about 106 million before the war) rose to 127 million in 1948 and, after dropping slightly below this level in 1949 and 1950, began to rise again to a maximum of 133 million in 1952. The increase in cattle stocks over the last few years has taken place in spite of the fact that Argentine herds suffered severely from the prolonged drought. This factor caused a decrease in the average weight of the animals for slaughter and an increase in slaughtering breeding cattle. The countries contributing principally to the rise in the cattle population were Brazil and Colombia, where herds appear to have expanded by 15 per cent and 11 per cent respectively between 1948 and 1951.

In spite of greater animal stocks, statistics indicate a decline in slaughterings and exports, especially of cattle. This decrease originated almost exclusively in Argentina, where the effect of the drought on the 1951 and 1952 production was marked.[15] In Mexico, on the other hand, the complete eradication of foot-and-mouth disease has permitted a resumption of exports of meat and cattle on the hoof to the United States.

One of the principal Latin-American problems as regards beef production consists of inadequate stabling capacity and feeding methods. If bovine livestock matured somewhat earlier and the type of grazing and system of pasturage were improved, by allowing for more paddocks, the present herd population could provide a much higher extraction rate and thus raise meat produc-

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[14] United States Department of Agriculture, *Foreign Crops and Markets,* vol. I, No. 14, 7 April 1952.

[15] The situation caused by the drought obliged the Argentine Government to take measures to reduce beef consumption. Strict rationing for two days a week was introduced throughout the country, while the population as a whole was encouraged to modify its diet. See the text of the Letter of Convocation for the First Argentine Congress for Food Rationalization, 1952.

Table 141. Extraction rate of cattle in Argentina Brazil and Uruguay

(Percentage slaughterings of total herds)

Year	*Argentina*	*Brazil*	*Uruguay*
1947...........	19.8	10.8	16.7
1948...........	20.0	11.6	..
1949...........	21.2	11.6	..
1950...........	22.6	11.3	17.0
1951...........	19.0	11.5	16.0

Source: ECLA, based on data noted in sources to table 128.

tion. Uruguay and Argentina maintain the highest standards in this respect; the remaining countries show livestock conditions very similar to those in Brazil. However, the difference between methods in Latin America and countries like the United States is still appreciable (see table 141).

Pork availability remained at a high level during 1951 and 1952, in spite of a decrease in slaughterings in Argentina and Uruguay, due to the considerable productive expansion of this type of meat in Brazil and other countries. The poor maize crop in the River Plate area contributed to minimize the number of births and delay pig fattening for the market.

Beef exports reached a low level in 1951 and 1952, not only because of the difficulties which hindered production in the River Plate area, but also on account of delays in Anglo-Argentine trade negotiations. In spite of these problems, however, exports of tinned meat from Argentina, especially to the United States, showed a fairly substantial increase. This was probably due to the fact that the lack of pasture for fattening, together with the protracted negotiations over the United Kingdom contract, caused the over-stocking of the refrigerated warehouses, obliging the surplus meat to be tinned. This increase, which represented an additional income from the sales of tinned meat of about 10 million dollars annually, nevertheless failed to compensate for the loss of about 75 million dollars in the trade with Great Britain.

On 31 December 1952, an additional protocol to the 1949 Trade and Payments Agreement was signed by the British and Argentine Governments governing the commercial relations between the two countries. The new protocol fixes the meat to be exported by Argentina to Great Britain during 1953 at 238,000 tons. It also establishes new prices involving increases up to 28 per cent for certain grades, including within these prices all meat exports effected since August 1952, the time when the shipments made under the previous protocol were completed.

(g) *Cotton*

The growth of the cotton crop has been one of the outstanding features of Latin America's agricultural development in recent years. In some cases, as in Guatemala and parts of Mexico, cultivation has risen due to land specifically opened up for this purpose. Elsewhere cotton has displaced other crops; examples are Nicaragua, where rice and coffee have yielded ground to cotton, and the State of São Paulo in Brazil, where oilseeds have been replaced. Two factors accounting for the increase were, firstly, good prices on the international market and, secondly, the desire on the part of some countries to attain economic self-sufficiency.

Estimates of the Latin-American cotton production for 1952 indicate a heavy increase over the previous year, with a record figure of more than a million tons. Half this production came from Brazil, where almost as much cotton as in its years of maximum production was harvested. Nevertheless this country suffered a decrease in the percentage of the best qualities and has experienced difficulty in disposing of its crop abroad, owing to the over-valuation of the cruzeiro.

During the last few years, Mexico has been transformed from a self-supporting country to an important exporter of cotton. From the period 1934-38 to 1952, production has risen from 69,000 to 276,000 metric tons and although for 1953 the area under crop was limited to make way for an increase in wheat production, a high figure, approximating that of 1952, is expected. Yields are high and the costs of production lower than in the United States, whereas the opposite is true of wheat. In spite of a small decline, prices remain favourable.

Increases in cotton production have also been recorded in El Salvador, Guatamala and Nicaragua. In Guatemala, the expansion was given official support, but appears to have encountered technical difficulties. The Instituto de Fomento de la Producción has nevertheless declared its intention of satisfying domestic consumption in two years' time.

In Nicaragua, private enterprise played the leading role, but has met with difficulties in the disposal of the 1952 crop abroad. In El Salvador, where the same difficulties as regards exports arose, although the yield per unit area improved considerably from 1942 onwards, it is proposed

Table 142. Latin America: Production, exports and prices of cotton

Year	*Production and exports*			*Production*					
	(1948=100)			*(thousands of metric tons)*					
	Volume produced	*Volume exported*	*Export prices*	*Latin America*	*Brazil*	*Mexico*	*Argentina*	*Peru*	*Other countries*
Pre-war [a].............	103	100	38	634	405	69	54	84	22
1947.................	97	116	81	597	347	96	69	65	22
1948.................	100	100	100	616	320	120	90	61	25
1949.................	130	83	101	803	396	208	94	67	38
1950.................	147	103	110	905	393	260	134	73	45
1951.................	141	107	168	871	349	288	97	83	54
1952.................	173	90	119	1,055	516	265	129	97	48

Source: ECLA, based on data noted in sources to table 128.

[a] Average of 1934–38 for production, and of 1937 for exports and prices.

Table 143. Latin America: Production, exports and prices of wool [a]

Year	Production and exports (1948=100)			Production (thousands of metric tons)			
	Volume produced	Volume exported	Export prices	Latin America	Argentina	Uruguay	Other countries
Pre-war [b]	77	68	75	276	170	51	55
1947	..	107	81	...	..	..	..
1948	100	100	100	358	230	68	60
1949	89	65	139	320	193	65	62
1950	92	102	186	328	185	74	66
1951	96	43	335	345	195	84	66
1952	92	64	161	328	190	85	53
1953	94	..	..	334	184	86	64

Source: Official data.

[a] Production and exports in terms of greasy wool.

[b] Average of 1934–38 for production, and of 1937 for exports and prices.

to extend the area of cultivation. Cotton would not hold its present position in the production of this country, if it were not for the incentives which the government has provided. Since 1942, both the cultivation and sale of cotton have been pronounced to be of public benefit; the Cooperativa de Algodoneros Salvadoreños was established in the same year. Through this organization, production has been regulated, pests have been attacked and the domestic price fixed. This association also centralizes all cotton operations, including that of ginning.

(h) *Wool*

Latin-American wool production in 1952-53 reached 334,000 tons, exceeding that of the previous year by about 6,000 tons, in terms of greasy wool. This high figure reflects the trend of the world clip, which according to unofficial estimates [16] was about 2 per cent greater than in 1951.

World production of wool, which amounts to 150,000 tons more than the present annual rate of consumption, together with the decrease in North American purchases at the beginning of April 1951, may explain in part the price fluctuations which have occurred on the international market during recent years. The rapid increase in price, which began in the middle of 1950 as a result of stockpiling undertaken by North American industry when the Korean war started, reached its peak towards the end of March 1951 with a level five times higher than that of 1948. With the subsequent price decline, Argentine and Uruguayan exports were suspended for nearly a year, firstly, because they were unwilling to sell at the prices offered, and secondly (in the case of Argentina) because exporters were unable to export at the ruling rate of exchange without incurring losses. As a result, there was a substantial accumulation of wool stocks which eventually exceeded the equivalent of one and a half clips.

With the beginning of the price recovery in the middle of 1952, the revision of the Argentine rate of exchange for wool, and the suspension of the export tax in Uruguay, international trade was renewed on an appreciable scale. On the London market, prices for merino wools rose 20 per cent from the beginning of May to the middle of June, 1952, while that of cross-breeds increased from 20 to 25 per cent. It was believed in international wool circles that the worst of the crisis was over and that prices would show at least a moderate upward tendency.[17] This price trend was in fact already apparent in Argentina towards the end of 1952 and the beginning of 1953.

(i) *Flax*

The cultivation of flax for seed and oil, which occupied considerable areas in Argentina before the war, has continued to decline rapidly. Increases in production in Uruguay and Mexico, despite their importance in relative terms, are in actual fact small, having little influence on

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[16] Commonwealth Economic Committee.

[17] Twenty-first Conference of the International Wool Textile Organization, London, June 1952.

Table 144. Latin America: Production, exports and prices of flax

Year	Production and exports (1948=100)					Production of seed (thousands of metric tons)		
	Volume of seed produced	Volume exported		Export prices		Latin America	Argentina	Other countries
		Seed	Oil	Seed	Oil			
Pre-war [a]	178	8,208	—	25	33	1,810	1,731	79
1947	..	102	133	138	103	..	..	..
1948	100	100	100	100	100	1,051	901	150
1949	55	132	138	86	64	606	433	173
1950	75	606	315	69	53	806	676	130
1951	65	809	382	70	51	712	559	153
1952	44	255	73	..	..	493	313	180

Source: ECLA, based on data noted in sources to table 128.

[a] Average of 1934–38 for production; and 1937 for exports and prices.

the fall in the flax production index for the region as a whole.

Of late years, unfavourable world prices and the droughts which have affected crops in Argentina during the last two seasons have helped to accentuate the downward trend noted above. Before the crisis, it was easy for Argentina to sell its exportable flax surpluses. The crisis and the Second World War caused, amongst others, the serious problem of the accumulation of linseed and other stocks, for which there was, for the time being, no market. As a result there was a lack of incentive to sow the crop, and this, together with the loss of some foreign markets through Argentina's refusal to sell all its flax in grain form, intensified the difficulties of the situation.

4. PRODUCTION TRENDS, DEVELOPMENT PROGRAMMES AND ACTIVITIES

Agricultural expansion is now being given a greater degree of assistance within the over-all economic policies of the various Latin-American governments than has been the case in previous years. This tendency was of particular significance in 1952, when a number of programmes establishing definite targets were adopted and important measures affecting development were taken.

In certain cases this intensification of agricultural policy may be designed to counteract the downward trend in production (Argentina, Paraguay), or to increase a rate of growth which is slow in comparison with that of the population (Chile). In other cases, it may be desired to avoid the import of certain agricultural commodities which could be produced domestically, to the advantage of the general economy of the country (Peru). On the other hand, in almost every country, a balanced process of development is being sought and efforts are being made to ensure that agriculture will not be left behind. Some of these countries—Argentina, Paraguay, Peru and Uruguay—have either put into operation or are attempting to formulate programmes with definite production targets for those agricultural sectors in the expansion of which they are most interested; others—Brazil, Chile and Mexico—have adopted important measures to foster agricultural development.

(a) *Argentina*

Amongst the agricultural development activities recently announced in Latin America, the most important is the Argentine programme, which fixes targets for the areas to be sown with certain crops and for the increase in cattle stocks (see table 146).

The quantum of Argentina's agricultural production in 1952 was only 80 per cent of that of 1948, and 74 per cent of the 1944 level (the peak year for the last decade) and 87 per cent below the figures for 1934-38. It is true that the year 1952 cannot be considered a normal one on account of the drought.[18] However, the tendency for products such as cereals and flax to decline was already evident before the war, in addition to an almost continuous decrease in the area sown. This situation became particularly acute during the post-war period (see plate 39). The downward trend in cereals and flax during this period has been partly offset by the increase in a number of "industrial" crops in Argentina. These include both foodstuffs (sugar, ground-nuts, grapes) and raw materials (cotton, formio), all of which are almost entirely consumed domestically. Due to the relatively high degree of elasticity shown by the productive factors in the agricultural-pastoral sector of the Argentine economy,[19] the cattle population and the production of meat and wool rise as the grain production falls, thus compensating, at least in part, for the fall in over-all cereal production.

On the other hand, crops showing a tendency to expand are precisely those which have not been subject to collective buying and price control. They have received the full benefit of the incentives arising from the increase in demand caused by the demographic growth and the rise in the level of income.

Omitting the year 1952 as abnormal, it may be noted that the production of cereals and industrial oilseeds during the period 1948-51 was appreciably lower than that of 1934-38. Among the crops comprising these groups of commodities, those which declined most were maize, whose productive average in the four years under review was only 35 per cent of the level reached in the five pre-war years, and flax, whose production fell by 62 per cent between the two periods mentioned. Wheat production remained at a level 8 per cent below the average for 1934-48. Conversely, the remaining products of these two groups showed an upward tendency which, however, did not succeed in counteracting the fall experienced by other, and more important, crops. In the cereal group attention should be drawn to the increase in rice, production of which tripled, and to rye, which doubled, between the periods 1934-38 and 1948-51. In the industrial oilseeds group, the production of tung oil, which increased thirty times between the same two periods, was outstanding.

With the exception of the cereals and industrial oilseeds, all the remaining groups of products showed an average production level for the post-war period higher than that of the five-year period 1934-38. The smallest increase was recorded in meat production. Nevertheless, in view of its importance in Argentine pastoral and agricultural production, it was the predominant factor in compensating for the fall in maize and flax. The most rapid increase was shown in the production of edible oilseeds, which during the years 1948-51 was almost four times higher than in the pre-war period, mainly owing to the expansion in sunflower production, as well as to an almost continuous rise in that of cotton-seed. There was also a marked increase in the production of fibres, particularly cotton, which doubled between the pre-war period and 1948-51. Roots and tubers also rose, especially potatoes, production of which grew by 77 per cent, and dried vegetables, which increased almost threefold owing to enlarged crops of beans and lentils. Sugar production has also continued to improve, although at a slower rate. Its development has been more gradual and has been subject to less pronounced fluctuations than the remainder of Argentine agricultural production. Together with cotton, wool, tobacco, rice and wine-grapes, sugar is among the commodities whose output during 1952 did not decline.

The Argentine agricultural expansion programme, announced in 1952, established immediate targets for the 1952-53 harvest, together with others over a somewhat more extensive time basis which form part of the govern-

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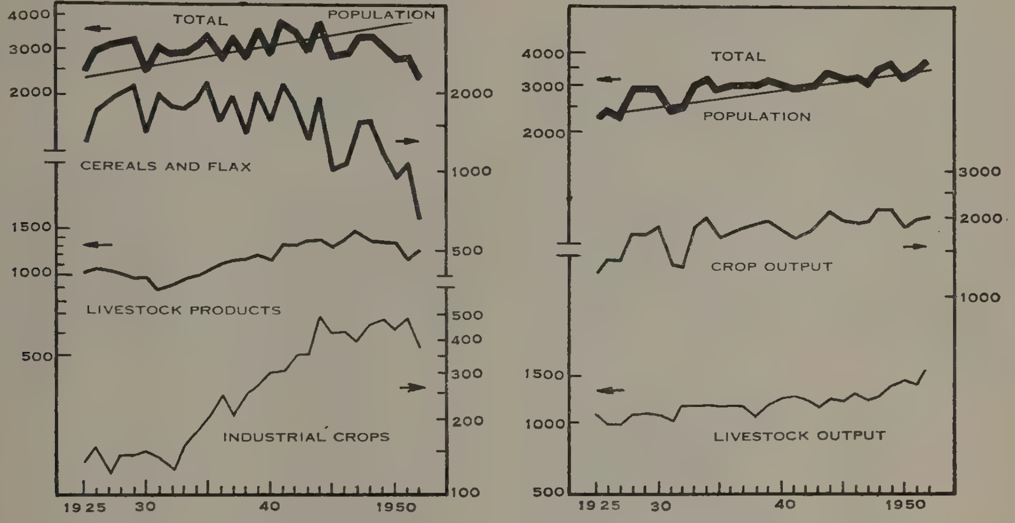
[18] See explanation regarding the 1952 crops given in 2 (*b*) above.

[19] In certain years part of the land for cereal crops is turned over to grazing, when, in the farmer's judgment, low prices or reduced yields do not cover the cost of harvesting. Moreover, the areas where the planting of cereals has been discontinued allow an extension of the natural or artificial pastures and lead to an increase in the number of livestock.

Plate 39

QUANTUM OF CROP AND LIVESTOCK OUTPUT AND ITS COMPOSITION, 1925-52

(Semi-logarithmic scale)

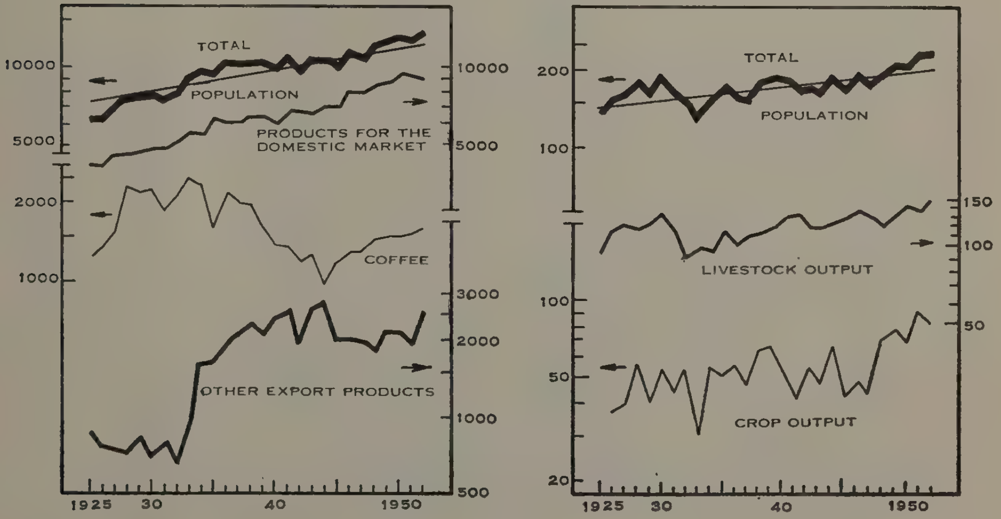


Argentina

Millions of pesos at 1937 prices

Chile

Millions of pesos at 1937 prices



Brazil

Millions of cruzeiros at 1937 prices

Uruguay

Millions of pesos at 1937 prices

ment's second five-year plan (1952-57). In spite of excellent climatic conditions, however, the 1952-53 targets were not fully attained. Of the 7.5 million hectares of wheat, 1.6 million of flax, 3.8 million of maize, 1.6 million of oats, 1.2 million of barley and 2.5 million of rye which the plan aimed at putting into cultivation, only 6.3 million hectares of wheat, 1.0 million of flax, 3.0 million of maize, 1.3 million of oats, 1.0 million of barley and 2.2 million hectares of rye were in fact sown.[20] The main reason why these targets were not reached lies in the deterioration of farm equipment and lack of manpower. The purchase prices announced by the Instituto Argentino de Promoción del Intercambio (Argentine Institute for Trade Promotion) had the effect of encouraging farmers to extend their sown areas, since they represented—at least at the time sowings commenced—the first real improvement which cereal producers had experienced since 1948 (see tables 131 and 145).

However, good climatic conditions during 1952-53 partly compensated for the smaller areas sown, so that yields were higher than average, particularly in the case of wheat, for which the grain itself was both heavier and denser than usual. According to official estimates, wheat production in 1953 will reach 7.8 million tons. Of this total, 3.1 million must be set aside for domestic consumption and seed, and a further 300,000 tons for replenishing reserves. Of the remainder, 300,000 tons were sold to Italy, and it is planned to export 1.5 million to Brazil and 300,000 to Japan. Two million tons remain for sale to other countries. The other cereal crops are estimated at 4.5 million tons of maize, 1.1 million of oats, 1.2 million of barley and 1.3 million of rye. Allowing for the necessity to replenish current reserves of all these cereals, which were almost exhausted, possible exportable surpluses may amount to 1.5 million tons of maize, 400,000 of oats, 680,000 of barley and 800,000 of rye. But the

Table 145. Argentina: Purchase prices for cereals, flax and sunflower

(In Argentine pesos per 100 kilogrammes)

Product	1951	1952	1953
Wheat	30.50	34.00	50.00
Flax	41.00	50.00	65.00
Maize	..	30.00 [a]	45.00
Oats	21.00	25.50	38.00
Barley	23.50	29.50	43.00
Rye	23.50	28.00	42.00
Sunflower	29.50	34.00 [b]	44.00

Source: ECLA, based on data noted in sources to table 128. Prices from the Instituto Argentino de Promoción del Intercambio (IAPI); excluding subsidies.

[a] Raised to 40.00 pesos on 20 May 1952.

[b] Raised to 44.00 pesos on 12 May 1952.

Table 146. Argentina: Agricultural expansion plan for 1957, compared with areas planted and cattle stocks of previous periods

(Thousands of hectares and thousands of head)

Products	1957 target	Present situation [a]	Previous maximum	Average 1934–38
Wheat	8,000	6,270	9,219	7,500
Flax	2,000	1,020	3,497	2,935
Maize	7,000	3,000	7,630	6,670
Oats	1,900	1,331	2,147	1,459
Barley	1,400	1,021	1,371	739
Rye	2,800	2,154	2,154	951
Rice	72	61	61	18
Sunflower	2,000	1,603	1,806	158
Cotton	650	586	586	319
Groundnuts	160	161	182	104
Sugar-cane	300	276	276	164
Wine-grapes	200	177	177	140
Yerba maté	94	64	65	57
Tobacco	42	42	42	15
Guayule	10	—	—	—
Tea	6	2	2	
Alfalfa	8,000	7,017	8,502	6,284
Sudan grass	500	371	402	115
Other animal feeding-stuffs	200	..	..	..
TOTAL OF CROPS LISTED ABOVE	35,334	25,156	28,496 [b]	27,628
Livestock				
Cattle	42,000	45,263 [c]	43,000	33,762
Sheep	52,000	54,684 [c]	56,182	44,900
Pigs	4,500	3,989 [c]	10,000	3,976 [d]

Source: Argentine second five-year plan and Dirección General de Estadística y Censo (Argentina).

[a] Areas sown or cattle stocks in 1952–53, except in cases where data for this period are not available, when the latest available figures are used; these generally correspond to those for the 1951–52 season.

[b] Does not represent the sum of the parts, but the maximum area sown with the crops indicated in the table for any given year.

[c] 1952 census.

[d] 1937.

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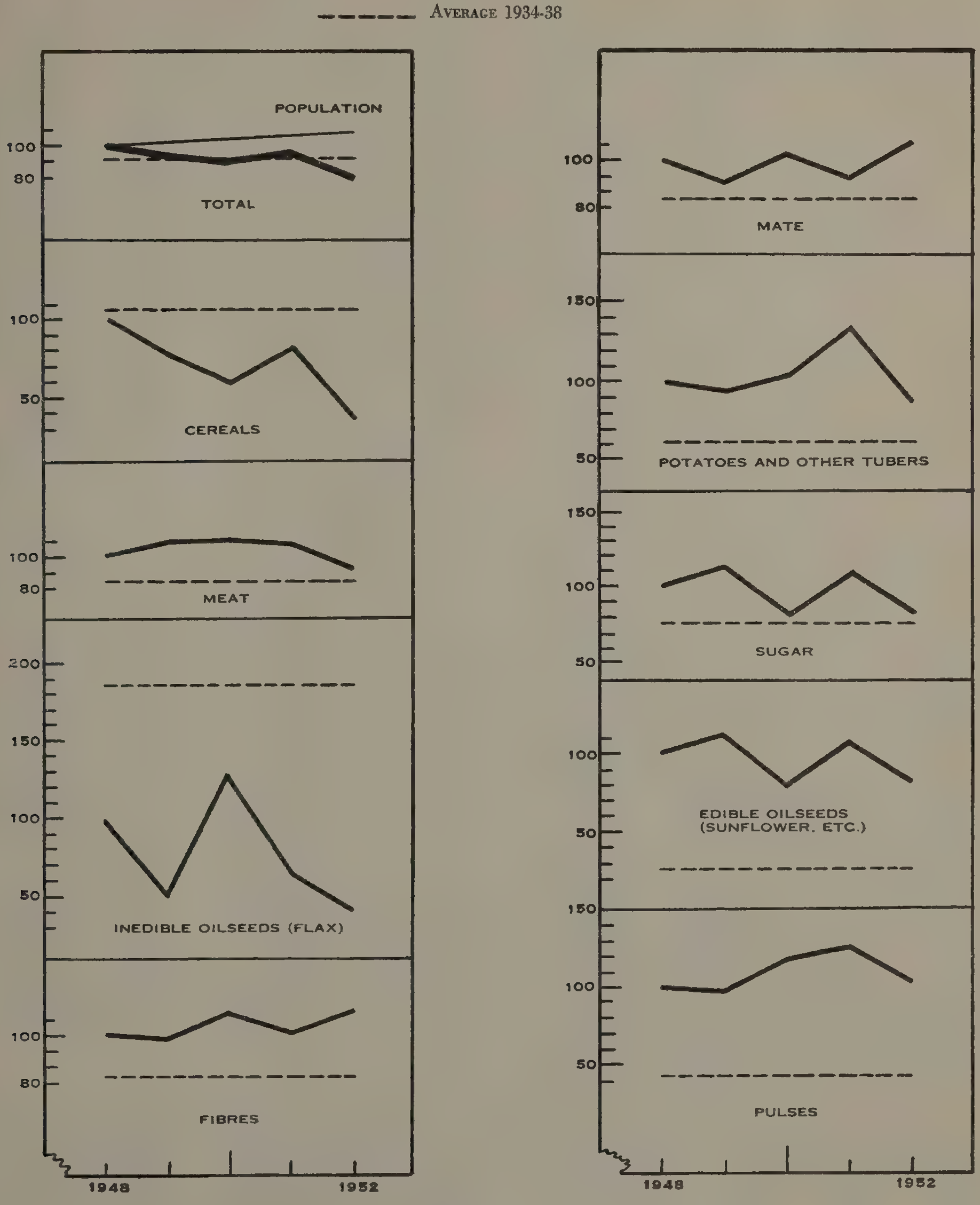
[20] Official estimates.

Plate 40

INDICES OF AGRICULTURAL OUTPUT IN ARGENTINA, 1934-38 AND 1948-52

1948 = 100

(Natural scale)



flax harvest, estimated at 650,000 tons, together with the stocks of oil and seed controlled by the Institute (IAPI), will allow about 600,000 tons of this product, in terms of seed, to be exported.

During the second five-year plan, the agricultural expansion programme aims at achieving a very considerable increase (40 per cent) in the area sown at present, and will involve nineteen different commodities (see table 146).

The magnitude of the undertaking can be appreciated if it is recalled that the over-all objective of 35.3 million hectares is almost 7 million hectares more than the area attained in previous periods.

The greatest expansion anticipated is in cereals and flax, the cultivated area being increased by more than 8.3 million hectares, or about 56 per cent higher than the present level of sowings. In the 1957 programme, however, flax has been given a less important place than previously, whereas a considerable expansion in oats, barley and rye is planned. This important modification in the structure of grain production is probably due to the changes experienced in the demand for these products on the European market, to the desire to benefit from price variations in favour of oats, barley and rye on these markets, as well as to the loss of the United States market for flax and the fall in the price of this product on the world market.

If each product is considered separately, it would not seem impossible for these targets to be reached, since those fixed for the commodities with the greatest percentage growth are similar to, or even lower than, the maxima reached in previous periods. However, if these increases in area sown and cattle population are considered as a whole, it will be seen that the Argentine economy has never at any time previously raised production to such a high level which are possible, if a better use is made of the land.[21] In previous periods the peak figures for areas sown or for cattle population (see plate 40) were always achieved at the expense of decreases in other agricultural and pastoral sectors. Furthermore, in periods during which the greatest areas were sown, crops occupied about 4 million hectares of marginal lands not suitable for annual crops. On the other hand, the second five-year plan does not provide for large irrigation programmes to increase the area of arable lands in agricultural zones with a variable climate.

Varying measures for assisting this agricultural expansion programme have been adopted. Mininum prices for the 1953 crop (see table 145), which represent a real improvement in relative prices for grain as compared with other commodities, at least at the time of sowing, were announced well in advance of the beginning of the agricultural year. Furthermore, the Central Bank granted import licences for agricultural machinery of various origins to the value of 310 million Argentine pesos, a figure which represents an absolute maximum and which is equal to the total value of agricultural equipment imported during the previous five-year plan.[22] In order to import all the machinery, spares and other items devoted to agricultural expansion, a preferential rate of exchange of 7.50 pesos per dollar has been established. In addition, mechanized teams, which lend their services to farmers at cost, have been organized with public funds, in order to distribute production equipment to better advantage and thus overcome one of the most important obstacles hindering expansion.

With the object of solving the problem of manpower shortages, the government will be responsible for 50 per cent of the cost of the second-class fares of workers migrating to regions which lack labour at certain seasons of the year. In addition, in 1952 the precedent of employing the army for harvesting was established, should an emergency occur.

As regards the prices for cereals and for transport, it is of interest to note that, through the purchasing regulations, it has been laid down that a farmer will not suffer any loss due to price changes. In addition, certain measures connected with the rotation of the means of transport, including co-operatives, have been established to facilitate their full employment in 1953.

Similarly, within the general assistance to agriculture, a mention must be made of the government's decision to bear a 50 per cent reduction in the railway charges for transporting cattle to winter grazing ground in cases of drought.

All these measures have been supplemented and strengthened by the widening of credit facilities and the establishment of the "Planned Agrarian Credit" system of the Banco de la Nación Argentina, which is guided by two main principles:

(1) Using the national ecological map as a basis, the best possible uses and the essential priorities have been established for each region, and

(2) For those farmers who adjust their operations to the fixed norms, leading to a full use of the land, preferential treatment will be given as regards credit.

With the application of both these rules it is hoped to move crops by degree and with the minimum degree of disruption into the zones best suited to them, as well as to obtain an expansion in the area planted. It is also hoped that the redistribution of production will improve the unit yields and the quality of the commodities, thus giving rise to a reduction in costs, and that this improvement in yield and increase in the area planted will in turn lead to the final objective of increasing production. In its first stage of development, the credit plan will be applied to the most important agricultural and pastoral zones of production. Without detriment to a normal course of development of the other items, the bank aims to achieve the expansion and ecological redistribution of wheat, maize, oats, barley, rye, sunflower and flax, as well as an intensification of the breeding properties and winter fattening of beef cattle, an increase in milk production, and the development of sheep and pigs in the zones best suited to them.

(b) *Brazil*

In 1952, Brazilian agriculture produced a volume of foodstuffs and raw materials 19 per cent higher than in 1948 and 34 per cent above the average for 1934-38. Almost all agricultural sectors showed a tendency to expand, but the actual increase in export products only represented a recovery towards the peak reached in previous years. Brazil has for many years succeeded in basing agricultural activities on domestic consumption,

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[21] Report on agricultural production, Sociedad Rural Argentina, 1953.

[22] During the last few years Argentina has imported tractors to the following values (millions of pesos):

Year		*Year*	
1947	28.9	1950	50.7
1948	75.0	1951	137.5
1949	31.1	1952	310.0 [a]

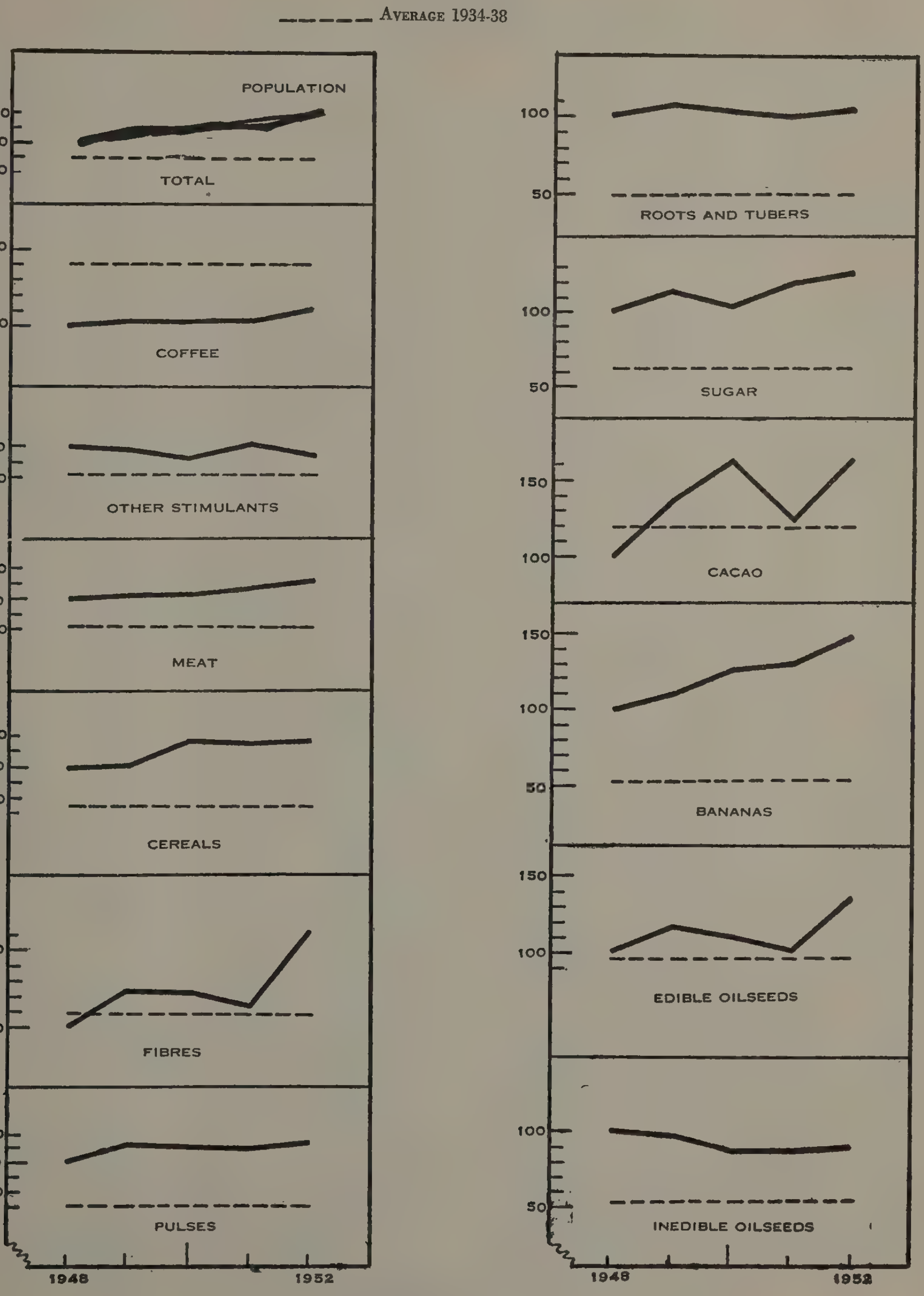
[a] Licences granted.

Plate 41

INDICES OF AGRICULTURAL OUTPUT IN BRAZIL, 1934-38 AND 1948-52

1948 = 100

(Natural scale)



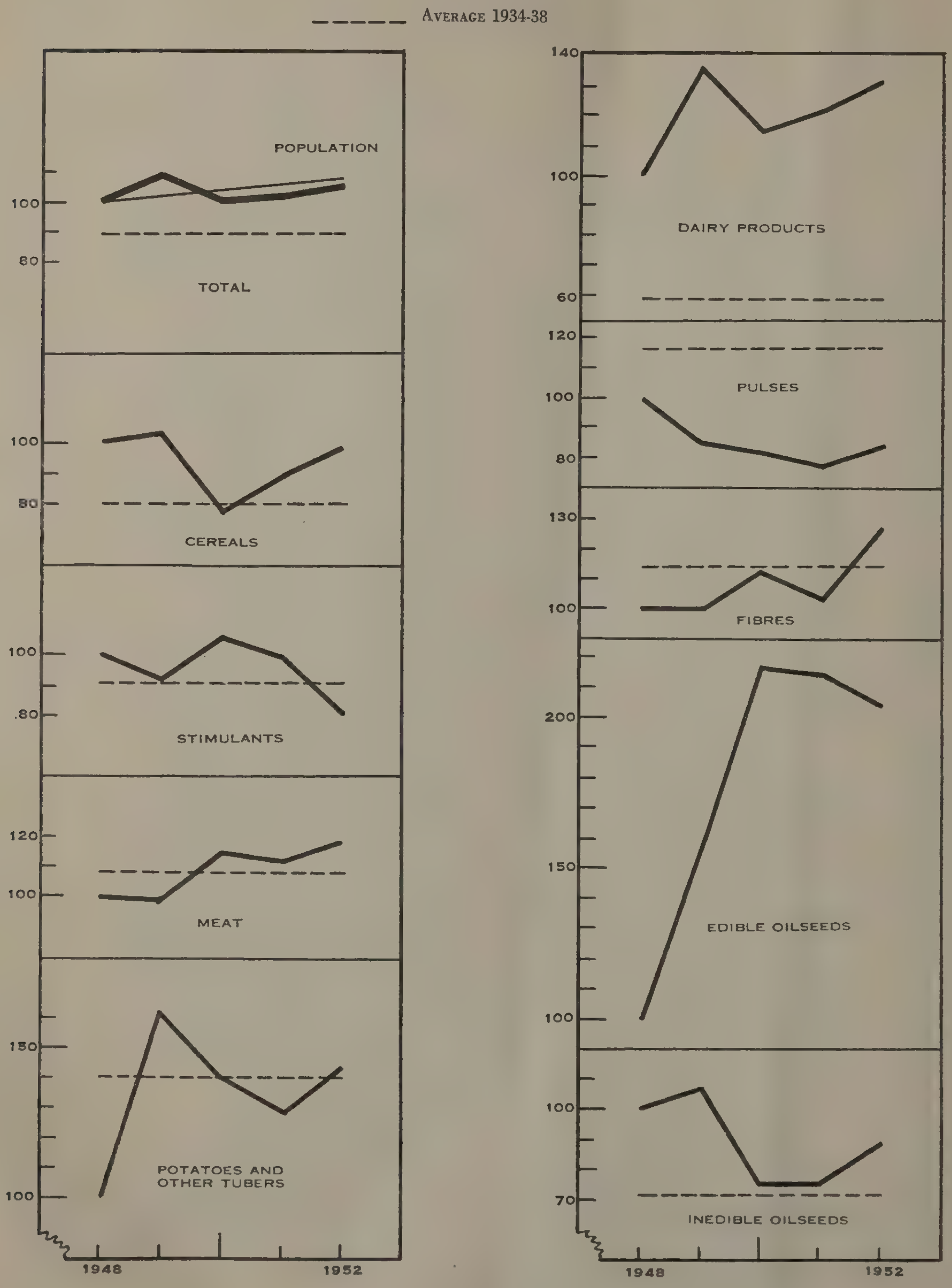
Economic Commission for Latin America

Plate 42

INDICES OF AGRICULTURAL OUTPUT IN CHILE, 1934-38 AND 1948-52

1948 = 100

(Natural scale)



Economic Commission for Latin America

and they have developed in proportion to the growth of population. On the other hand, the substantial volume of agricultural exports has fluctuated sharply thus hindering continuous and uniform growth in this sector. While coffee production fell because of the great depression of the thirties, output of other export products, of which the most striking example is cotton, grew rapidly, reaching a peak in the same year that coffee fell to a minimum. For this reason it has been said that coffee and cotton in Brazil have opposing economic cycles. Due to the high price levels on the world market and the opening up of new arable areas, both crops have recently shown an upward tendency. This trend in both cases represents a recovery towards the peak production of previous periods.

This extension of the various areas sown has partly eliminated the competition for productive factors between coffee and cotton at certain seasons in the zone of São Paulo.

Coffee still remains below pre-war levels and even further below those of its peak period production (see plate 41). In 1952, Brazil produced only 80 per cent of the coffee harvested in 1934-38. On the other hand, the level of production of the other stimulants, particularly tobacco, remained 18 per cent higher during the last five years than in the period before the war.

The increase in cotton should be noted, since production —although higher than that of pre-war periods—has still not yet fully recovered to the maximum level reached in the middle of the 'forties. Conversely, there has been a very rapid rise in the production of cereals, especially wheat and maize. In the same way sugar, bananas and manioc have also recorded fairly considerable increases.

Among the many agricultural development activities being carried out in Brazil, those relating to the programme for silos and refrigerated warehouses, agricultural mechanization and the increase in coffee yields, are outstanding.

The plans for a silo and refrigerated warehouse system, which are now complete and for which building contracts will soon be placed, will absorb about 1,500 million cruzeiros. They will place Brazil in a favourable position as regards meeting periods of shortage, grading the distribution of the commodities placed on the market, and ensuring reasonable prices to farmers by means of the manipulation of stabilized reserves.

The Ministry of Agriculture has drawn up a programme of mechanization which includes the sale of machinery, the operation of mechanized teams and the training of agricultural experts, tractor drivers and mechanics. During 1951 and part of 1952, more than 120 million cruzeiros were devoted to the sale of agricultural machinery. In the middle of 1952 the programme was reinforced by a loan of 23 million dollars from the Export-Import Bank, which will allow more than 3,500 tractors, complete with equipment, to be acquired. It is estimated that with this machinery it will be possible to work over 500,000 hectares.

The Bagé Experimental Station in Rio Grande do Sul has developed a new variety of high-yielding wheat with which it is hoped to accelerate the increase in production necessary to reach the annual target of 1.3 million tons set by the government.

Efforts are being made to raise the yield of coffee bushes by employing better methods of cultivation and introducing new varieties. At the Mocóca Agricultural Station, experiments in coffee irrigation are being completed, with satisfactory results. At the Campinas Experimental Station, work on selection is being carried out with a coffee variety called "Mundo Novo", identified in 1943. It was obtained from a natural hybrid of the "Sumatra" and "Borbón" varieties and has revealed undoubted advantages as regards yield and hardiness.

The Experimental Stations in the State of São Paulo have been working on obtaining cotton varieties yielding a greater amount of fibre per unit weight of the boll cotton. Introduction of new varieties began in 1938 and has produced results of great significance for Brazil's economy. The fibre yield for ginned cotton in São Paulo rose from 31 per cent during the period 1934-38 to 36 per cent in 1949-51; in 1951 this 5 per cent increase in yield meant additional earnings of some 726 million cruzeiros for cultivators in the São Paulo area.[23]

(c) *Chile*

For many years agricultural and pastoral production in Chile have increased at a lower rate than that of the population, and this tendency has continued during recent years. In 1952, agricultural output was only 5 per cent greater than in 1948, and 18 per cent more than the period 1934-38. Cereals, wine and chicha, dried vegetables and the production of flax-seed and hemp-seed remained below the 1948 levels. The rises recorded in the output of meat, potatoes, milk, wool and sunflower seeds were not sufficient to enable agricultural production to balance the growth in population. In 1952, Chilean agriculture produced 2 per cent less per capita than in 1948, and 8 per cent less than the average for the pre-war period 1934-38 (see plate 42).

This slow growth of agricultural production has led to an increasing interest for its development in government circles. Some years ago an agricultural plan was drawn up, which, although not put into practice, had the advantage of clarifying prevailing opinions and emphasizing the importance of agricultural and pastoral expansion in Chile's economy. A joint technical mission from the International Bank for Reconstruction and Development and the United Nations Food and Agriculture Organization recently visited the country. Their report will serve as a basis for a well-integrated policy with specific targets.

The most important measures taken recently include special credits for the development of cattle breeding and wheat production. The Caja Agraria (Agricultural Bank) has devoted public funds, amounting to 150 million pesos, for this purpose and is granting credits for animal fodder production, the construction and improvement of cattle pens and shelters, the purchase of stud stock and breeding animals and the feeding of dairy calves. The object of this last is to eliminate as far as possible the present high mortality rate for newly-born animals.

The plan for dairy products expansion, begun in 1948, is proceeding successfully. Through this plan, producers are being assisted by means of health campaigns, research on feeding-stuffs, technical advice and loans for acquiring stud stock and building cattle sheds, silos and other farm installations. Until mid-1952, the Instituto de Economía Agrícola, the body responsible for administering the plan, had distributed 190 million pesos in loans, mainly for dairy equipment and subsidized campaigns against foot-and-mouth disease and Bang's disease. Although milk

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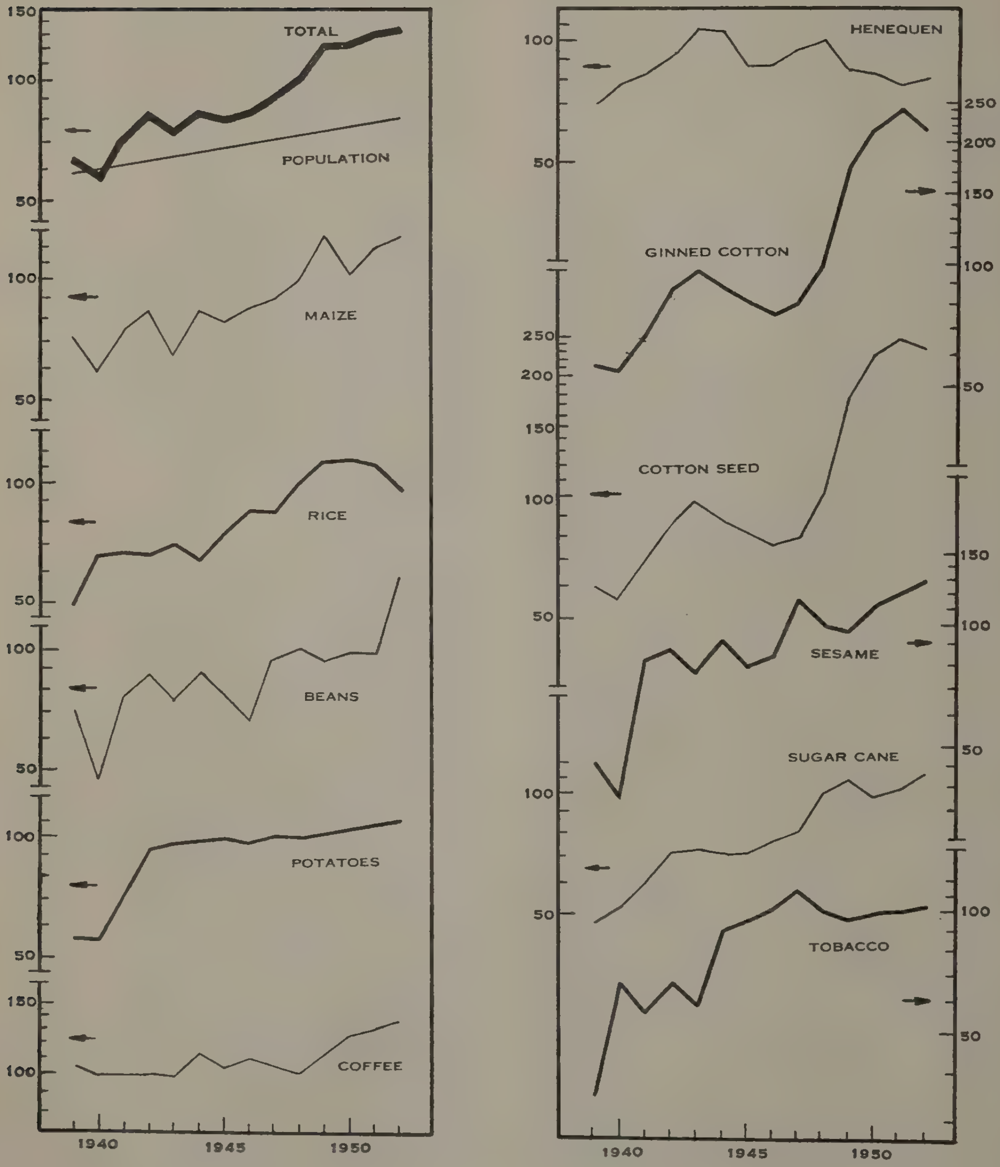
[23] Ministry of Agriculture (Brazil), *Boletim da Subdivisão de Economia Rural*, July 1952.

Plate 43

INDICES OF AGRICULTURAL OUTPUT IN MEXICO, 1939-52

1948 = 100

(Semi-logarithmic scale)



output is not yet sufficient to meet the demand at the present levels of prices and income, it has risen considerably since the plan was introduced, having increased from 500 million litres in 1945 to 830 million in 1952.[24]

The Corporación de Fomento (Chilean Development Corporation) has completed the technical research and cost trials for the sowing and industrial utilization of sugar-beets, and has already bought the machinery for the first plant, which will produce 10,000 tons of sugar per year.[25]

The results observed and the scientific analysis of the yield, early-maturing capacity, resistance to disease and grain-shedding of about 500 varieties of wheat, may be considered authoritative and of prime economic importance. The "Vilmorin 29" variety, which the experimental stations recommended for sowing in the southern section of the country, has led to increases in yields of more than 20 per cent. The "Baflo" variety, originating from the cross-breeding of two strains of Italian origin, is being planted in the central zone and has displaced varieties previously cultivated not only on account of its superior yield but also because of the basic requirement of the region, viz., early-maturing capacity. The Paine Experimental Station recently obtained a cross from the "Mentana" and "Thatcher" varieties which produces a wheat with the yielding qualities of the first but which is at the same time immune to rust. This disease causes losses in the central zone estimated at 350,000 metric quintals annually. It is calculated that, in 1953, 15,000 metric quintals of the new seed will be cropped for distribution among farmers, allowing for the planting of 12,000 hectares, or about 5 per cent of the area in cultivation in this zone.

The Paine Station has also succeeded in its efforts, begun in 1941, to improve the maize crop by developing "Maize Hybrid 4193" which produces 25 per cent more than the best varieties now cultivated in Chile. Production from this seed will allow a fifth of the area sown to be covered in 1953—about 10,000 hectares—thus producing about 50,000 additional quintals of maize.

The Instituto de Economía of the University of Chile and the Corporación de Fomento de la Producción have together prepared a system of tables designed to enable farmers to employ their tractors to the best possible advantage. These tables contain instructions as regards the position of the various implements, the width and depth of the furrow and the speed of the tractor according to the type of soil, its humidity and the vegetation with which it is covered. Through the use of this data, it has been proved that farmers can work 25 per cent more land in the same time and for the same fuel cost.

(d) *Mexico*

The volume of agricultural production in Mexico has continued to increase at a fairly rapid rate during the last two years, mainly owing to the substantial increase in the area devoted to maize, cotton and oilseeds. These crops have registered an almost continuous rise since before the war, reaching, in 1951, a production 30 per cent higher than that of 1948, and 108 per cent higher than in 1939. The rate of expansion has always been greater than that of the population. While the latter, between 1940 and 1952, rose at an average rate of 2.6 per cent, agricultural output registered an average increase of 6.7 per cent annually (see plate 43).

Nevertheless, in 1952, agricultural production remained nearly unchanged, increasing less than one per cent over 1951. This decline in the rate of expansion was due to the stationary production of maize, which was scarcely 2 per cent greater than the previous year, and the decline of the cotton, wheat and rice crops, which were, respectively, 8, 13 and 16 per cent below 1951. In 1952, despite the less favourable conditions, Mexican agricultural production was 31 per cent higher than 1948 and 109 per cent above the figures immediately before the war. Furthermore, the principal crops in 1952 maintained levels far higher than those of 1948 and 1939. A series of crops—sesame, coconut, sugar-cane, oranges, pineapples, alfalfa, cacao, tobacco, coffee and potatoes—all continued to show a productive increase during 1952 in comparison with previous years.

The bulk of the Mexican population is concentrated on the central plateau and exercises considerable pressure upon the agricultural resources of the area, while about 80 per cent of potential agricultural land requires irrigation. Thus Mexican expansion programmes have so far assigned greater importance to the extension of the irrigated areas.

Up to the end of 1952, investments in irrigation by the Mexican Government had improved a total area of 1,567,000 hectares, as compared with the 216,500 from the initiation of the programme in 1928 to 1938 inclusive. The increase between 1947 and 1952 alone amounted to 750,000 hectares (see table 147). The Secretaría de Recursos Hidráulicos declared in November 1952 that the 1947-52 programme had been largely completed, and that an additional 155,000 hectares had been improved by means of small-scale irrigation. The programme is continuing and a number of catchment areas of considerable importance, such as Miguel Hidalgo (270,000 hectares), Falcón (220,000 hectares) and Presidente

Table 147. Mexico: Investments in irrigation projects and area irrigated

Year	*Total investments (millions of pesos)*	*Area irrigated (thousands of hectares)*	
		Yearly total	*Over-all total*
1928–38	..	..	216.5
1939	38.1	22.6	239.1
1940	36.3	32.1	271.2
1941	56.7	40.0	311.2
1942	63.0	141.0	452.2
1943	83.0	83.9	535.1
1944	117.1	68.7	603.8
1945	139.6	27.3	631.1
1946	189.0	213.7	816.1
1947	228.3	120.3	936.4
1948	249.3	104.3	1,040.7
1949	260.7	82.5	1,123.2
1950	371.9	63.8	1,187.0
1951	502.1	54.8	1,241.8
1952	419.0	325.4	1,567.2
1953	520.0	..	..

Source: 1928–51, Joint Commission of the Government of Mexico and the International Bank for Reconstruction and Development, *The Economic Development of Mexico and its Capacity to absorb Foreign Capital*, tables 38 and 39; 1952 and 1953, estimates based on provisional estimates and data supplied by the Secretaría de Recursos Hidráulicos.

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[24] Data supplied by the Instituto de Economía Agrícola.

[25] The complete plan provides for the installation of three plants over a ten-year period.

Alemán (150,000 hectares), are at present under construction. For 1953 it is estimated that more than 500 million pesos will be invested in this type of work. According to the source mentioned above, the crop occupying the greatest area under irrigation is cotton, which covers about half the area, followed by maize and wheat.

In collaboration with the Rockefeller Foundation, the Government of Mexico has been working on improving the standard of crops. It has obtained new varieties leading to increases in production, which will become greater as better varieties are produced and their cultivation becomes more general. Outstanding successes have been obtained in the improvement of maize and other food crops such as wheat, beans, rice and sesame. In addition to their higher yielding capacity, the new varieties possess other characteristics which make their cultivation particularly suitable for the regional environment in which they are produced. They also eliminate, or at least reduce, the influence of other factors limiting the possibility of good yields and extending the crops to other areas and other seasons of the year.

In the case of maize, synthetic and hybrid varieties have been obtained suitable for use in most of the areas under maize in Mexico. There are high-yielding, early-maturing varieties, as well as others resistant to drought, winds and the various pests and diseases. Their cultivation has led to average yields 25 per cent greater than those for the best existing indigenous varieties. As regards wheat, new varieties have been produced, which provide a high yield, have good baking qualities and, thirdly, are resistant to fungus diseases. This last characteristic enables wheat to be grown in the summer. Since humidity increases the incidence of fungus diseases and the summer is rainy in Mexico, none of the previous varieties have ever been harvested in that season. It is estimated that 6 per cent of the maize and 25 per cent of the wheat areas were planted with the new varieties in 1952. Improvements in the bean crop aim not only at obtaining varieties with a high yield and better resistance to disease, but also specifically to provide for early-maturing and upright growth. They were developed to avoid the risks to which late-maturing varieties are exposed when the rainy season is short. In addition, they would avoid a sowing season which might coincide with that of maize, because insect and pest control is impractical for both crops simultaneously. For sesame, uniform maturing varieties with a high oil content have been obtained. Research has been carried out on the same lines for rice, and at present improvement in the early-maturing qualities and in the counteraction of their propensity to grain-shedding is being sought for these varieties.

Table 148. Paraguay: Minimum plan for 1953 agricultural production, compared with sowings in previous periods

Product	*Targets for 1953*	*Average sowings for 1945–49 (thousands of hectares)*	*Increase sought on 1945–49 (per cent)*
Rice	15.0	5.0	200.0
Potatoes [a]	15.0	7.6	97.4
Ground-nuts	20.0	11.9	68.1
Manioc	75.0	45.7	64.1
Tobacco	10.0	7.5	33.3
Sugar-cane	20.0	12.5	60.0
Cotton	65.0	45.3	43.5
Onions	2.5	1.7	47.1
Peas	2.5	..	..
Alfalfa	2.5	1.8	38.9
Maize	105.0	80.0	31.3
Beans [b]	25.0	22.5	11.1
TOTAL	357.5	241.5 [c]	47.0 [c]

Source: Official data.
[a] Sweet potatoes.
[b] Kidney beans.
[c] Excludes peas.

The use of the new varieties in the various agricultural zones is becoming wide-spread. Their production and distribution is being carried out by special organizations such as the National Maize and Wheat Committees.

At the end of 1952 and beginning of 1953, the government announced a short-term agricultural programme designed to improve the supplies of maize and beans, both of which are staple foodstuffs for the bulk of the Mexican population. Guaranteed prices for both these products have been fixed, which it is hoped will provide both a stimulus for production and be beneficial to the consumer. It is planned to extend credit facilities through the two official agricultural banks so as to extend the area under these crops by some 300,000 hectares. The research work being carried out by the National Maize Committee, and other bodies, will be intensified.

(e) *Paraguay*

Agricultural production in Paraguay shows a downward trend which is particularly marked in comparison with the growth of the population (see plate 44). The principal cause for this decline has been the decrease in meat production since 1950. In contrast, other sectors of agriculture, with the exception of yerba maté, seem to have grown with considerable rapidity within the last five years, particularly sugar, edible oilseeds and maize. These increases have not, however, succeeded in counteracting the effects of the fall in meat production, which is the main export product of the country. The decline in meat exports caused exchange difficulties, and these in turn have led to the formulation of a policy for expanding agricultural exports and reducing food imports.

In June 1952, the government issued regulations fixing the 1953 targets for the areas to be sown with twelve crops (see table 148), placing particular emphasis on rice and sweet potatoes, besides recommending the gradual increase in the cultivation of fruit trees and garden produce in general. The Ministry of Agriculture is responsible for dividing up the area to be sown according to the productive characteristics of each department, and for establishing the necessary rules and sanctions for the efficient execution of the plan. This Ministry was also entrusted with fixing the guaranteed minimum prices for all the commodities included in the programme, while the responsibility for supplying the required seed is in joint charge of the Bank of Paraguay and the Inter-American Technical Service for Agricultural Co-operation (STICA).

The target for increasing the aggregate area sown with the principal crops represents a figure 47 per cent greater than the average for 1945-49. During this latter period, it should be noted that unstable political conditions affected agriculture, causing some decrease in production. At all events, the minimum plan for 1953 aims at obtaining a higher percentage increase of the area than at normal times.

Plate 44

INDICES OF AGRICULTURAL OUTPUT IN PARAGUAY, 1934-38 AND 1948-52

1948 = 100
(Natural scale)

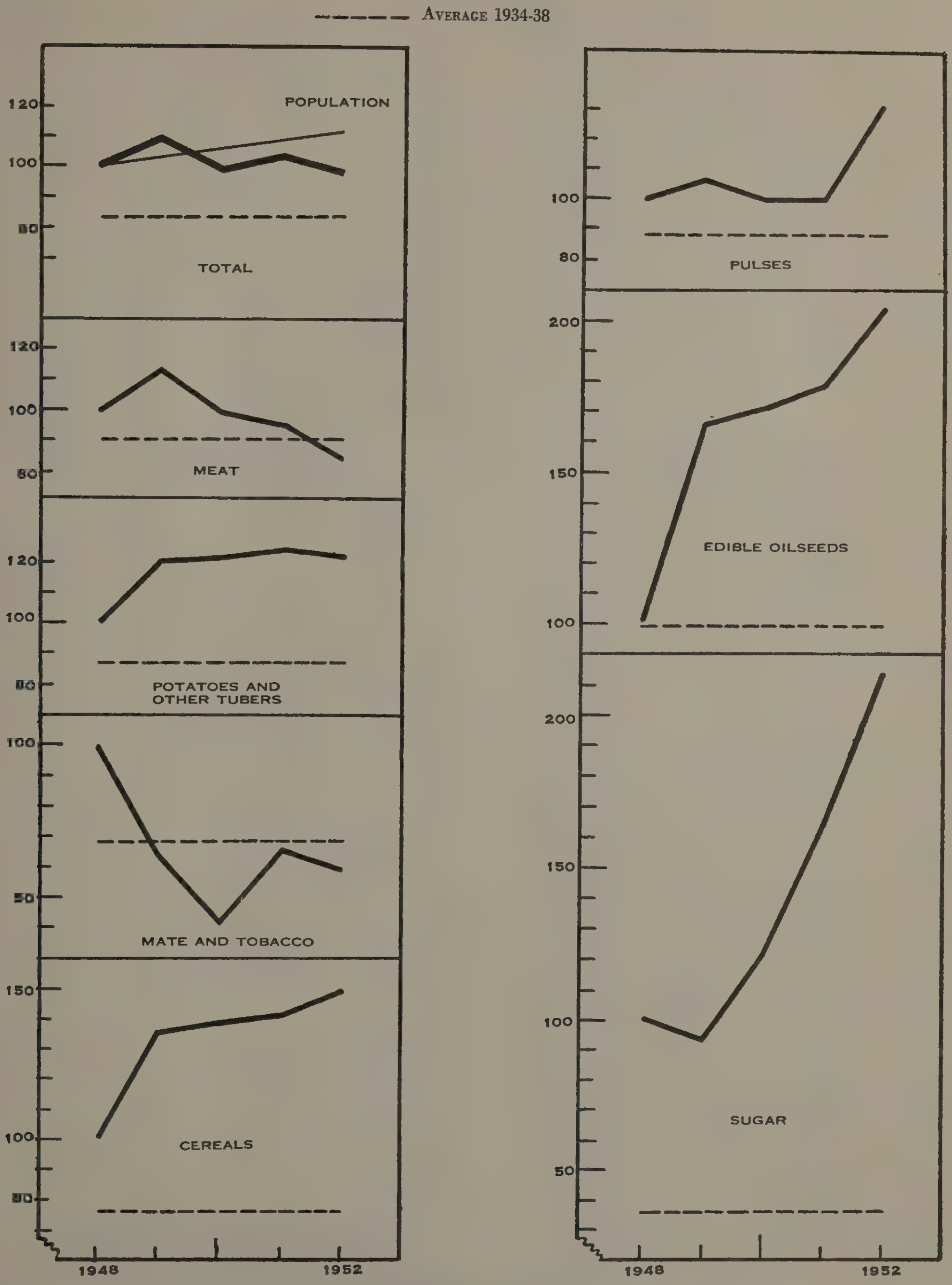

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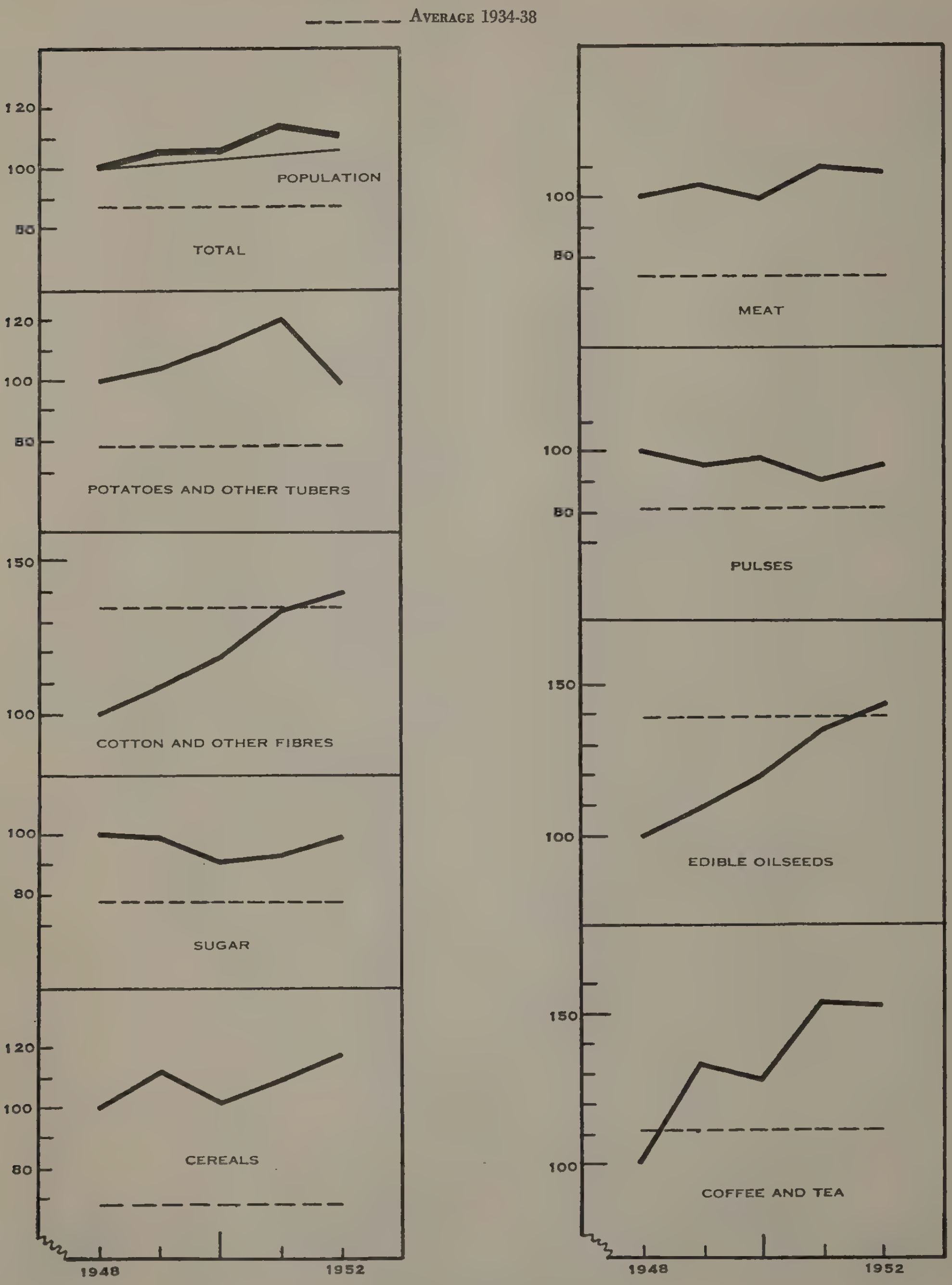
Plate 45

INDICES OF AGRICULTURAL OUTPUT IN PERU, 1934-38 AND 1948-52

1948 = 100

(Natural scale)



Economic Commission for Latin America

(f) *Peru*

During the last few years, the rate of increase in Peru's agricultural production was higher than that of the demographic growth. Agricultural production in 1952 was 11 per cent higher than in 1948, while the population increased at a rate of 5.2 per cent during the same period (see plate 45). If a similar comparison is based upon 1934-38, the increase represents 28 per cent. This rise in agricultural production was partly due to the recovery to pre-war levels as regards cotton production, and also to the rise in the output of cereals, meat, sugar and stimulants. Among the most important items of domestic agriculture are potatoes, due both to the quantity produced and to the fact that they are the staple diet for the bulk of the population.

Agriculture in the coastal region depends entirely upon irrigation and the availability of guano and other fertilizers, the use of which is a constant source of competition between export crops and those for domestic consumption. The increase in export products is irregular and normally rises in periods when the world market offers good prices. This has been the case with cotton over the last few years. On the other hand, the growth of crops for domestic consumption, stimulated by the rise in population and income, appears to be more regular and to offer less risk, although it is sometimes slower.

The necessity for increasing the availability of foodstuffs, in order to satisfy domestic consumption, led to an official plan for expanding production in the middle of 1951. According to statements by the Ministry of Agriculture, this plan is designed to prevent domestic sources of foodstuffs being adversely influenced by imports. In certain specific cases the aim is to ensure that domestic production will cover the entire demand, and in others to raise output as far as possible in order to reduce the quantum and value of foreign purchases. Initially, production of meat, wheat and rice will be expanded, and at a later date that of other foodstuffs. This increase in food production will not affect that of other crops destined for export and which constitute the main source of Peru's foreign exchange earnings. The programme will be developed between the years 1951-52 and 1956-57, and is designed to increase meat production progressively so as to cover domestic requirements fully. In addition it is aimed to double the present production of wheat and stabilize rice output, thus avoiding the sharp fluctuations to which this latter crop is at present subject and which causes the necessity for rice imports at times. The definite targets fixed for the end of the programme comprise the production of an additional 85,000 tons of meat, 120,000 tons of wheat and 12,000 tons of selected rice.

The required investment is estimated at 267 million soles, of which 227 million is to be applied to livestock development, 27 million to wheat and 13 million to rice; 217 million soles is made up of credit which will eventually be repaid by farmers, the majority of the remaining 50 million representing the value of installations of various kinds, machinery, vehicles and other assets which will remain at the disposal of the State. In terms of 1951 prices, the approximate value of the projected increases in the annual production of meat, wheat, and rice are estimated to amount to 535 million soles for the year 1956-57. To this should be added the benefits which it is assumed will result from lighter foreign exchange expenditure, the creation of new sources of work, and the suspension of the subsidies which are at present granted in order to maintain low prices for the consumer.[26]

The following bodies will collaborate in carrying out this programme; the Ministry of Agriculture, which is responsible for over-all planning and the grant of technical assistance through the Inter-American Co-operative Service for Food Production (SCIPA), and the Banco de Fomento Agropecuario del Perú which lends the required funds through a system of long-term, non-interest credit, for which only service costs are charged.

Among the measures adopted to ensure that the plan is fully carried out and that the targets are reached, the most important are the import of breeding cattle and the establishment and extension of stud and artificial insemination farms; the import of machinery, wire and other implements supplied to farmers on easy credit terms and at cost prices; the construction of slaughter houses and freezing plants in livestock areas; the extension of experimental farms for breeding and stock production; the introduction and distribution of improved types of seed; the establishment of mechanized teams; and the granting of credit without interest, over a term of eight to ten years, for buying stock, machinery and agricultural implements for sowing pastures, for constructing silos and for establishing grazing areas.

During the plan's first year, stock-raisers received about 4,200 kilometres of fencing wire and 3,900 breeding animals, mainly cattle. In addition, the government invested one million soles in improving cattle farms at Pucalpa and Cajamarca belonging to the Inter-American Co-operative Service (SCIPA). Investments in livestock during this first year totalled 24 million soles. In addition, 1.5 million soles were spent in seed, machinery, storage facilities and vehicles for the wheat programme and 1.2 million soles for that of rice. A loan of 20 million soles (1.3 million dollars) for the purchase of new equipment for the mechanized teams was also obtained from the International Bank for Reconstruction and Development.

(g) *Uruguay*

Uruguayan agricultural production has grown with considerable rapidity during the last five years. In 1952 it was 26 per cent higher than that of 1948, a rise almost identical to that noted in the pre-war period (see plate 46). Meat production—the heaviest item—has not increased to any extent since pre-war years. Cereals, wool, potatoes and edible oilseeds, however, rose at a considerable rate, being the determining factor in the trend towards a higher growth of production than in population. The 1952 meat production, which represented about the same level as the post-war average, was only 7 per cent higher than in the period 1934-38, indicating a growth very much below that of the population. On the other hand, cereal output reached a peak in 1951 with a remarkable maize harvest, in conjunction with good crops for the remaining products. The cereals showing the greatest increase as compared with pre-war levels were wheat, rice and barley. Wheat production for 1952 was 34 per cent higher than in 1934-38, having reached its maximum in 1949. Rice and barley tripled and doubled their production respectively over the period 1934-38 to 1952. Wool showed a continuous tendency to rise during the post-war period, reaching its peak in 1952, with a production 59 per cent

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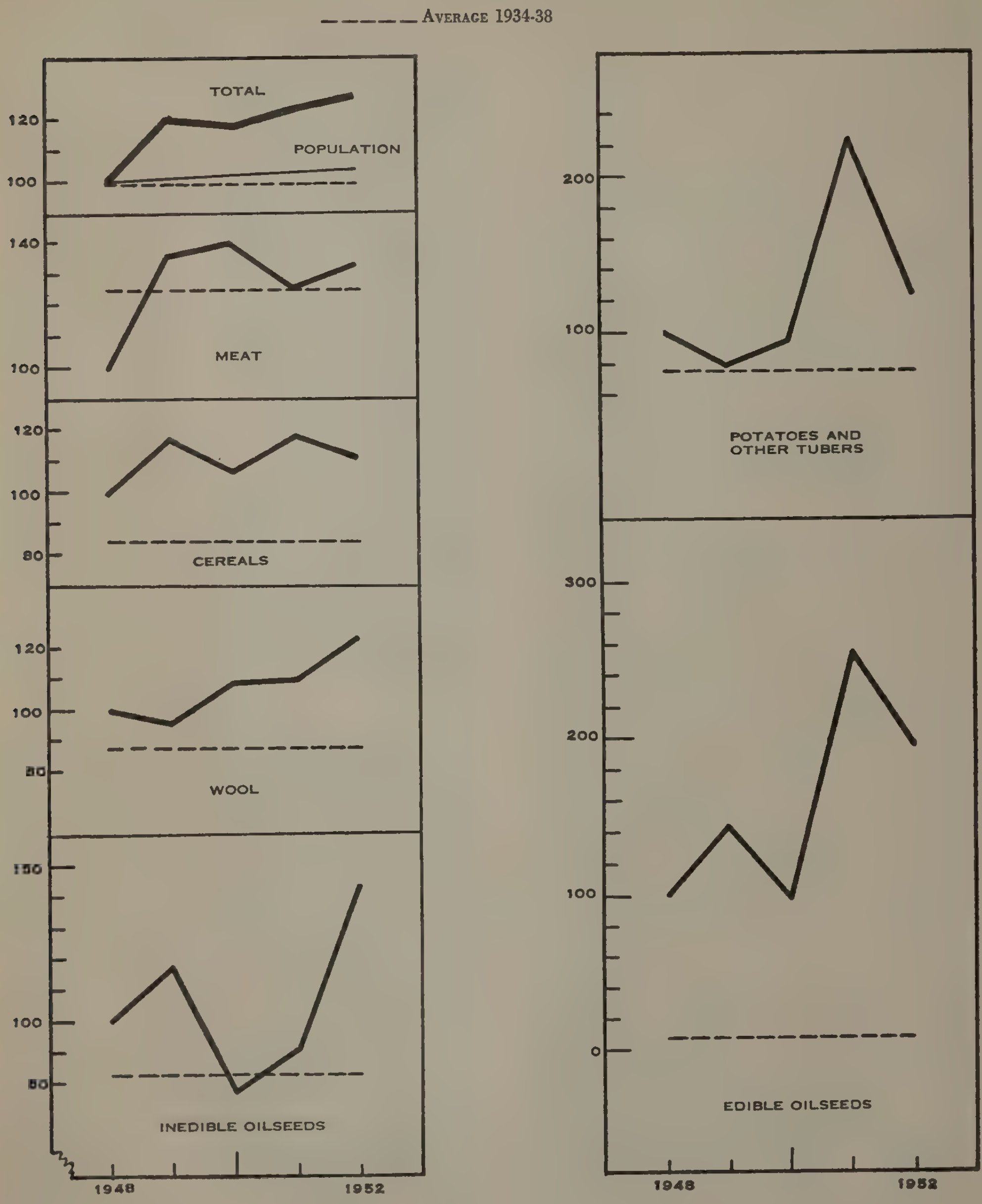
[26] In 1951, the Government of Peru paid 54 million soles to cover the difference between the purchasing and selling prices of frozen and fresh meat.

Plate 46

INDICES OF AGRICULTURAL OUTPUT IN URUGUAY, 1934-38 AND 1948-52

1948 = 100

(Natural scale)



greater than that for the years 1934-38. Over the same period linseed continued to present a variable trend, with characteristic and very pronounced fluctuations, but also achieved a record production during 1952.

The commodity groups with a more pronounced tendency to rise were edible oilseeds, whose production increased twenty-three times between 1934-38 and 1948-52 owing to the expansion in the cultivation of sunflower and ground-nuts, and roots and tubers, mainly on account of the rise in potato cultivation.

Agricultural development in Uruguay is being accomplished through a complex programme. Among the measures figure the establishment of guaranteed minimum prices for certain crops, the payment of direct and indirect subsidies to farmers, the distribution of improved varieties of seed—mainly wheat—the provision of technical advice by regional agricultural experts of the Ministry of Livestock and Agriculture, and the struggle against pests and diseases. These measures have frequently been applied to relieve emergency situations, but the government is trying to continue its agricultural policy by means of a more co-ordinated plan with definite targets. Early in 1951, a joint mission from the International Bank for Reconstruction and Development and the United Nations Food and Agricultural Organization visited Uruguay with the object of drawing up an agricultural development programme. The mission reached the conclusion, as also had previous surveys by Uruguayan experts, that a short-term policy was of no practical advantage in dealing with the decline or the stagnant condition of agriculture and stock raising, as witnessed in certain activities. Their recommendations placed particular emphasis upon the possible development of livestock in Uruguay. It could be accomplished almost exclusively through primary and direct use of the grazing on natural pasture lands. But the inbred quality of the stock is extremely high. Thus it was proved that increases in milk, meat and wool production did not so much depend upon the improvement of stock as on better measures for sanitation and feeding. It is possible that, as regards health measures, progress could be achieved without requiring substantial modifications in the system of livestock exploitation; but it is not the case for feeding. To take full advantage of the factors for pastoral production, radical changes are required, involving a sub-division of the grazing land, a different and rotated system for the pasturage fodder, an increase in watering facilities and in tree planting to provide shade and shelter.

In May 1952, taking advantage of these conclusions and recommendations, the Ministry of Livestock and Agriculture presented to Congress a "Plan for the Incorporation of Basic Improvements in the Development of Livestock Production in Uruguay". Into this project, based on the latest techniques and a detailed calculation of costs and benefits to be obtained, it is proposed to invest 164.2 million pesos for the acquisition of 115,600 kilometres of wire, the drilling of 5,000 wells, the construction of 25,000 watering places for cattle and the planting of 100,000 hectares of trees for shade and shelter. Fifty-three per cent of the investment would be financed by Uruguayan capital and the remaining 47 per cent would have to be obtained through an international loan. The latter funds would be devoted to purchasing certain items unobtainable domestically, such as wire, lumber, equipment for supplying water and the construction of watering places, piping, pumps, wind pumps, etc. The programme should be carried out in the minimum period of five years. It is estimated that the increase in the value of livestock production resulting from these improvements alone, excluding the influence of such factors as pasturage rotation and the improvement of grazing, would amount to approximately 38 million pesos annually. This would permit the capital investment to be liquidated within twenty years of the date when the plan is completed.

5. TECHNICAL ASSISTANCE

International contributions to agriculture are greater than ever before and constitute one of the most important factors in the contemporary history of Latin-American agriculture. There are missions from United Nations organizations, mutual-aid programmes between the respective governments and the United States or foreign loans for agricultural development in almost every country. The tendency towards financing agricultural expansion by means of foreign resources is growing in some of these countries. In Mexico, for example, agricultural investments before 1947 were financed internally. Between 1947 and 1950, however, 14 per cent of such investments came from foreign resources, made up of funds for the eradication of foot-and-mouth disease, and loans for the construction of a fertilizer plant, the purchase of agricultural machinery and loans for irrigation projects. Brazil and Peru have also obtained international credit for the purpose of buying machinery, while Uruguay is negotiating a loan from the International Bank for Reconstruction and Development to complete its livestock improvement programme.

Before commencing a given programme of agricultural expansion, a number of countries take advantage of the services of the Expanded Programme of Technical Assistance of the United Nations in order to obtain an independent and objective opinion on their needs. At other times they employ these services to analyse or strengthen already existing development programmes. The largest section of the agricultural assistance programme is in charge of the United Nations Food and Agriculture Organization. Other international organizations take a direct part in these agricultural programmes only occasionally and usually in collaboration with FAO. Characteristic examples are the joint missions of the International Bank for Reconstruction and Development and the Food and Agriculture Organization,[27] study centres and seminars. The Economic Commission for Latin America has collaborated in some of these projects.[28]

By the end of 1951, FAO had allocated technical assistance funds to the value of 394,000 dollars in thirteen Latin-American countries. The figure for 1952 was calculated at 717,800 dollars and estimates for 1953 at more than 860,000 dollars, adding two more countries to the programme (see table 149). The amounts include salaries for technical experts and scholarship holders, purchases of material and equipment and expenses for training and instruction centres.

The countries concerned have been assisted mainly by planning, surveys and analyses of agricultural development programmes, the improvement of crops, pest and disease control, nutritional data, agricultural economy and

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[27] These missions studied the problems of Uruguayan and Chilean agriculture in 1950 and 1951 respectively.

[28] ECLA and FAO together sponsored the Latin-American Training Centre for Agricultural and Pastoral Plans and Projects (1951) and the Agricultural Credit Seminar in Central America (1952).

Table 149. Latin America: United Nations Expanded Programme of Technical Assistance administered by the Food and Agriculture Organization, 1951, 1952 and 1953

(Thousands of dollars)

Country	*1951*[a]	*1952*[b]	*1953*[c]
Brazil	33.6	68.9	179.0
Chile	88.2	201.3	237.4
Colombia	65.6	35.1	34.3
Costa Rica	1.7	21.6	20.0
Cuba	–	–	–
Ecuador	41.8	63.4	38.9
El Salvador	9.3	34.5	16.9
Guatemala	25.4	15.0	10.1
Haiti	20.8	49.5	60.0
Honduras	38.0	47.3	60.5
Mexico	56.2	115.9	96.1
Nicaragua	–	6.8	30.0
Panama	–	20.1	21.5
Paraguay	2.7	29.2	22.2
Peru	10.7	9.2	3.6
Uruguay	–	–	34.0
Venezuela	–	–	–
TOTAL FOR LATIN AMERICA[d]	394.0	717.8	864.5
WORLD TOTAL	1,471.3	..	5,489.0
Percentage applied to Latin America	26.8	..	15.7

Source: Information especially provided by FAO in their letter of 20 February 1953.

[a] Expenditure as at 31 December 1951.

[b] Revised estimate of 1952 expenditure.

[c] Estimate for 1953.

[d] Excludes seminars and educational programmes.

statistics, forest conservation and the development of fisheries.

The major programmes have been developed in Brazil, Chile, Colombia, Ecuador, Haiti, Honduras and Mexico.

In Brazil an expert in rural sociology acted in an advisory capacity to the Comissão Nacional de Política Agrária (National Committee for Agricultural Policy) for the study and planning of measures for agrarian reform and has undertaken teaching work in the Rural University of Rio. A specialist in agricultural extension work has acted as adviser to the government in the improvement of the Agricultural Extension Service. Another sociologist was in charge of a survey on areas suitable for colonization, with the object of resolving the problems of siting and developing new colonies. In relation to the programme for increasing wheat production, an agronomist studied economic conditions in the producing areas. In addition, a group of specialists aided Brazil to conduct research on the possibilities of large-scale exploitation of the forests in the Amazon region.

The planning and financing of the measures for agricultural expansion in Chile are being undertaken by various government departments. A joint mission of the International Bank for Reconstruction and Development and the Food and Agriculture Organization visited the country in 1951 to study the development of a better-integrated programme. Apart from this, Chile also obtained assistance as regards market problems, forestry legislation, the control of potato blight and the eradication of the blackberry, which covers a million hectares of arable and pasture land.

In Colombia, an expert in production has advised the government on its plans for increasing the output of rice, sugar, wheat, oilseeds, cotton and potatoes, while a group of veterinary specialists investigated and advised on the diagnosis and control of foot-and-mouth disease. Other technical experts lent by the Food and Agriculture Organization studied Colombian methods of cattle breeding and forestry exploitation with the object of proposing measures for improving them.

Ecuador is another country which has received substantial practical aid, obtaining advice upon problems related to the storage and distribution of food. Two experts were engaged, principally to advise upon the storage and trade in cereals. They surveyed the capacity and locations of the different types of warehouses required, secondly, administrative practices and operating costs with their relationship to markets and, thirdly, the establishment of a price stabilization system. Ecuador also received technical assistance in developing its fisheries and in improving wool production and allied industries.

In Haiti, since 1951, a forestry expert has been collaborating with the government in the reorganization of the forestry service and the development of a reafforestation programme having the dual objective of soil conservation and timber supply. In accordance with this programme, and to ensure their future distribution and propagation, the planting of special types of trees, selected by the expert from indigenous stocks for their quick-growing characteristics, their adaptability and rapid growth on poor or arid soils, has begun. Moreover, if these are exploited in a reasonable way, they would be able to produce immediate benefits in the shape of firewood, tannin or essential oils.

The Banco Nacional de Fomento de Honduras (National Bank for Development of Honduras) has drawn on the services of an agricultural credit expert, who has collaborated in the organization—and current application—of a planned agricultural credit programme for farmers who cannot obtain loans at commercial banks. In addition, a veterinarian was sent to take charge of the laboratory work in the animal industry section of the bank mentioned above. A forestry mission, composed of six experts, is working in Mexico on the study of plantations, types of trees and pests of the wooded regions of the tropical and temperate zones, as well as on the present situation of the forestry industry. A plant pathologist is collaborating in a research programme into diseases which attack the pineapple and which have given rise to large losses in this crop.

Prior to the establishment by the United Nations of the Expanded Programme of Technical Assistance, the United States Government, through the Office of Agricultural Foreign Relations of its Department of Agriculture, had assisted Latin-American agriculture by means of bilateral agreements in the organization of experimental stations and training services. This aid, which consists mainly in the supply of technical experts and research equipment, has recently been increased with funds from the Point Four programme. The most important institutions through which this aid has been administered are the Servicio Cooperativo Interamericano de Producción de Alimentos (SCIPA) which functions in Peru and Haiti. the Centro Nacional de Agronomía in El Salvador, and the Servicio Técnico Interamericano de Cooperación Agrícola (STICA) in Chile, Costa Rica, Honduras, Paraguay and other countries. All these bodies play an important part in the progress of the agricultural development programmes of their respective countries.

6. TECHNICAL AGRICULTURAL PROGRESS

(a) *Mechanization*

Agricultural mechanization in Latin America has continued to follow a progressive tendency since 1950, the most obvious proof consisting of the steady increase of tractor imports. Excluding small garden machines, aggregate imports for the region amounted to 26,000 units in 1950 and 41,000 in 1951. The official import programmes for Argentina, Brazil, Peru and other countries show that no decline occurred in 1952 and, if such programmes were entirely fulfilled elsewhere, new advances were made. Estimates by the Food and Agriculture Organization for the total number of tractors in use throughout Latin America give a figure of 118,000 units, which represents an 80 per cent increase over 1948.

The countries showing the greatest progress in agricultural mechanization during these years were Brazil, Uruguay and Venezuela.

The number of tractors in Brazil rose from 12,179 in 1940 to 17,846 in 1950 and 28,916 in 1951. In spite of this, Brazilian agriculture still requires a very much greater number of machines. The government is making efforts not only to increase imports, but also to manufacture equipment within the country. In mid-1952, the Fábrica Nacional de Motores signed a contract with an Italian firm to manufacture an initial 10,000 tractors.

Uruguay, in contrast, where units rose to 13,258 in 1951, is now becoming so highly mechanized that imports may continue to diminish until they are only sufficient to cover replacements. At present there is one tractor for every 95 hectares in cultivation. According to the Ministry of Livestock and Agriculture,[29] this high mechanization index allowed wheat sowings for the 1953 harvest (which at almost the end of the season covered only 40 per cent of the normal area) to be regularized in a very short period.

Argentina, where most machinery replacements are required, has not succeeded in obtaining the necessary foreign exchange for its overseas purchases. According to figures of the Asociación Argentina de Cooperativas, 40 per cent of the tractors in use in 1950 were acquired before 1936, 27 per cent between 1936 and 1940, and only 16 per cent since 1945. In 1951, 6,600 new tractors were added, representing 26 per cent of the estimated total of 25,000 units.[30] The government has adopted various measures to remedy the situation, amongst them the arrangement of barter agreements with certain European countries. According to official information it appears that 27 million dollars annually will be placed at the disposal of farmers for the purchase of machinery. Nevertheless, according to other official sources, it is necessary to allocate still larger sums for this purpose, in order to fulfil the short-range production targets set by the government and in view of the poor condition of most of the equipment. The larger amount of foreign currency (41.5 million dollars) allocated to farmers in 1952 for machinery seems to indicate a modification of policy in this respect.

The change in the relationship between tractor prices and those of agricultural produce has contributed to increase the use of these machines. In 1940 a farmer in São Paulo region had to sell 25.6 metric tons of boll cotton in order to acquire a 36 h.p. draw-bar tractor, while in 1951 he had to sell only 10.4 tons to buy the same machine.[31] In Chile, whereas in 1945 the same type of tractor was worth 50.5 metric tons of wheat, 66.0 tons of barley or 37.0 tons of sunflower seed, its price in 1952 had been reduced to 39.0 tons of wheat, 45.2 tons of barley or 33.0 tons of sunflower seed.[32]

The progress of mechanization has also been assisted by the modifications taking place in the relative prices of the production factors, particularly in the areas adjoining the larger urban centres. These modifications have had to be turned to economic advantage by the substitution of one factor for another. Reverting in this case to an example, also taken from Brazil, the following figures[33] show the cost of ploughing an alqueire of land (24,200 square metres) using animals and tractors respectively, a comparison which shows the advantages of machine ploughing at present:

(In cruzeiros)

Year	*Animal ploughing*	*Machine ploughing*
1940	96.30	132.50
1945	163.00	192.50
1951	358.00	272.30

(b) *Fertilizers*

Latin America, as a region, is a net exporter of fertilizers, owing to the large output of natural nitrates in Chile. But, in contrast, there is a deficiency of phosphates and potash. Due to the availability of by-products from livestock industries (blood and bones) and the guano deposits in some countries, a large proportion of the nutritive elements employed as fertilizers are of organic origin.

Production and consumption of fertilizers is increasing in a number of the Latin-American countries. According to data published by the Food and Agriculture Organization, total production of fertilizers rose 45 per cent between 1938 and 1952, while consumption grew by 81 per cent. The most important relative increases were recorded in the production and consumption of phosphates, which constituted the scarcest element in the fertilizer supply of Latin America (see table 150).

There is an urgent need in some countries for phosphate fertilizers and much has been done in recent years to improve domestic production. Argentina, Brazil, Chile, Colombia, Mexico and Uruguay are already producing chemical phosphates. Mexico is the main producer and the largest factory is located at San Luis Potosí, working with imported minerals and sulphuric acid produced locally.[34] In Colombia, 20 per cent superphosphate is being produced in a plant located at Medellín, which uses local supplies of sulphur and imported rock phosphate. The capacity of the plant is being expanded and Colombia produces all the sulphuric acid required by the fertilizer industry. Brazil has increased its productive capacity with the establishment of various factories; however, as this country depends on imported sulphur, its production of phosphates is limited by the possibilities for acquiring the raw material on the international market. A large part of the rock phosphate is also imported, although there is a local source at Jacupiranga, where the mineral extracted contains 19 to 20 per cent anhydrous phosphate in association with iron and aluminum. The iron is separated by magnetic operations, increasing the percentage of anhydrous phosphate to about 40 per cent. In Argentina a new plant, with a capacity for 60,000 tons of superphosphate, has been constructed. Sulphuric acid is obtained from a zinc roasting plant, and thus the sulphur supply presents no problem. Uruguay has three plants producing phosphates, all of them on the basis of imported rock and sulphur. The Latin-American chemical phosphate industry thus depends almost entirely upon imports of rock phosphate and, in some cases, upon sulphur imports as well.

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[29] *Boletín informativo No. 437.*

[30] Economic Commission for Europe, document E/ECE/139.

[31] Calculated by the Sub-Division of Rural Economy of the Ministry of Agriculture (State of São Paulo).

[32] However, in other countries where the real wage of the farmer has been reduced in comparison with the real price of the tractors, the opposite may have occurred.

[33] Calculated by the Sub-Division of Rural Economy of the Ministry of Agriculture (São Paulo) on a sample of 205 agricultural projects. These figures are the product of the costs for a day's servicing for each production factor by the number of days of work employed in the operation.

[34] Mexico also has a plant manufacturing nitrogen fertilizers, established in 1951, with a production capacity of 6,000 tons of sulphate of ammonia annually.

Table 150. Latin America: Recent changes in the production and consumption of chemical fertilizers

(Metric tons of contents)

				Percentage variation for 1952 over	
	1952[a]	*1938*	*1951*	*1938*	*1951*
(A) TOTAL PRODUCTION	*421,955*	*290,000*	*407,863*	*+45.5*	*+3.5*
Nitrogen					
Chile	271,696	223,500	268,070	+21.6	+1.4
Peru	36,000	21,000	35,440	+71.4	+1.6
Latin America [b]	326,196	244,500	320,064	+33.4	+1.9
Phosphorus					
Brazil	13,500	..	13,500	..	..
Chile	20,873	16,300	16,540	+28.1	+26.2
Peru	25,000	18,700	24,000	+33.7	+4.2
Latin America [b]	77,733	35,500	71,788	+119.0	+8.3
Potash					
Chile	11,526	10,000	9,871	+15.3	+16.8
Peru	6,500	..	6,140	..	+5.8
Latin America [b]	18,026	10,000	16,011	+80.3	+12.6
(B) TOTAL CONSUMPTION	*303,238*	*108,000*	*266,421*	*+180.7*	*+13.8*
Nitrogen					
Brazil	13,000	1,900	12,000	+584.2	+8.3
Chile	9,996	9,700	8,746	+3.1	+14.3
Cuba	25,687	..	19,939	..	+28.0
Mexico	16,000	2,800	12,500	+471.5	+28.0
Peru	39,630	19,400	37,680	+104.3	+5.2
Latin America [b]	119,529	53,000	105,130	+125.6	+13.7
Phosphorus					
Brazil	33,000	..	33,000	..	..
Chile	20,873	6,900	15,981	+202.6	+30.6
Cuba	26,635	3,250	19,348	+719.6	+37.6
Peru	25,350	17,300	24,000	+46.5	+5.6
Latin America [b]	129,419	30,000	114,609	+331.4	+12.9
Potash					
Brazil	14,000	..	12,000	..	+16.7
Cuba	18,128	1,100	16,214	+1,548.0	+11.8
Peru	6,510	6,400	6,210	+1.7	+4.9
Latin America [b]	54,290	25,000	46,682	+117.2	+16.3

Source: Document FAO/52/7/4819, and *Yearbook of Food and Agricultural Statistics*, FAO, 1950.

[a] Preliminary estimate.

[b] Includes other unspecified countries.

Chapter II

INDUSTRY

1. Introduction

With the passing of post-war readjustment, a new impulse towards industrialization—a fundamental necessity for the achievement of a long-term increase in the gross product of Latin America—is now apparent in various countries. During the last three years there has been a renewal of industrial investments in Brazil, Chile, Colombia, Mexico and Venezuela, where important governmental and private projects are being undertaken or studied, some of them with financial or technical assistance from the United States, Europe and other sources. In these cases, industrial output has increased rapidly. In countries, such as Ecuador, Peru, Uruguay and other republics, where consumer goods industries still predominate, difficulties have affected both industrial production and the rate of investment, even though some existing projects indicate a change in the industrial structure. Conversely, in Argentina, already highly industrialized, production has not only failed to return to post-war levels, but there was actually a marked decline in certain important industrial branches during several months in 1952. In addition new investment appears to be lower than formerly.

It is worth considering recent phenomena together with the growth of Latin-American industrial production since the beginning of the Second World War, to obtain a better understanding of the long-term progress. Analysis of industrial output curves for the region as a whole, and for some countries in particular, shows that in the last fifteen years the volume of manufacturing output increased more rapidly than the population in all countries where data are available. The rate of increase, however, has been extremely uneven in space and time. (See plate 47.)

All the countries were affected, more or less similarly, by varying difficulties caused by the war-time reduction of international trade, its revival during the first years of the post-war period, and the effects of the Korean war. Although a peak in the rate of growth occurred in the period 1940-45, and again in 1945-50, these did not coincide in the same year for each country. The annual increase reached a maximum during the immediate post-war years, declining after 1947, and becoming negative in the case of Argentina. Two exceptions are Chile, influenced by the opening of the Huachipato steel plant, through its very size, and Mexico, where, after the recession of 1945-47, investment acquired a new momentum which raised the annual rate of increase. Taken together, the six Latin-American countries included in plate 52 show accelerated industrialization in the post-war period, easing in 1951 and 1952.

Consumer goods industries, in general, have met with difficulties. At times these arose from domestic factors, such as poor harvests in some countries, which reduced agricultural income, thus causing maladjustment in sales and production; at other times the causes were external, such as strong competition from imports. A further influence has been the structure of the national product, which has often strictly limited the consumption possibilities of the majority of the population.

The cotton and woollen textile industries are among those which have generally experienced very unfavourable conditions, partly due to the increase in mid-1951 of cotton and wool prices. These coincided with a reduction caused by inflation, in the real income of large sections of the population, particularly in rural areas, the control of agricultural prices, or, in certain cases, by poor harvests. Exceptionally large imports of woven goods have been an influence in other instances. A further disadvantage is the low general efficiency of the textile industry, which better machinery and organization have improved only slightly. Finally there is the new competition from rayon and other artificial fibres, which, to a certain extent, are replacing cotton products.

The strongest industrial impulse in Latin Amerca has been that of capital goods. The basic iron and steel industry was extended to Chile in 1951 and 1952—the first time this country had produced steel in any appreciable quantity—and also to Argentina, Colombia and Peru where the first important projects are beginning to materialize. Brazil and Mexico continued to increase their capacity and volume of production. On the basis of these industries—the market for which, except in the case of Chile, is principally domestic and increasing in size—secondary mechanical industries and equipment factories have been developed, inaugurating a new industrial era for Latin America. In recent years, the subject had become sufficiently important to justify a first conference of iron and steel technicians from Latin America and other countries. It was held in October 1952, under the joint auspices of the Colombian Government and the United Nations, to examine and compare the technological and economic conditions for the development of iron and steel industries.[1] The total productive capacity of steel ingots in Latin America rose to over 1,500,000 tons at the end of 1952, representing an increase of over 100 per cent in five years.

Cement production has shown an equally high rate of increase. With consumption rising at more than 10 per cent annually in some of the principal countries, the productive capacity—which is continuing to expand—is already higher than 10 million tons per year and is meeting

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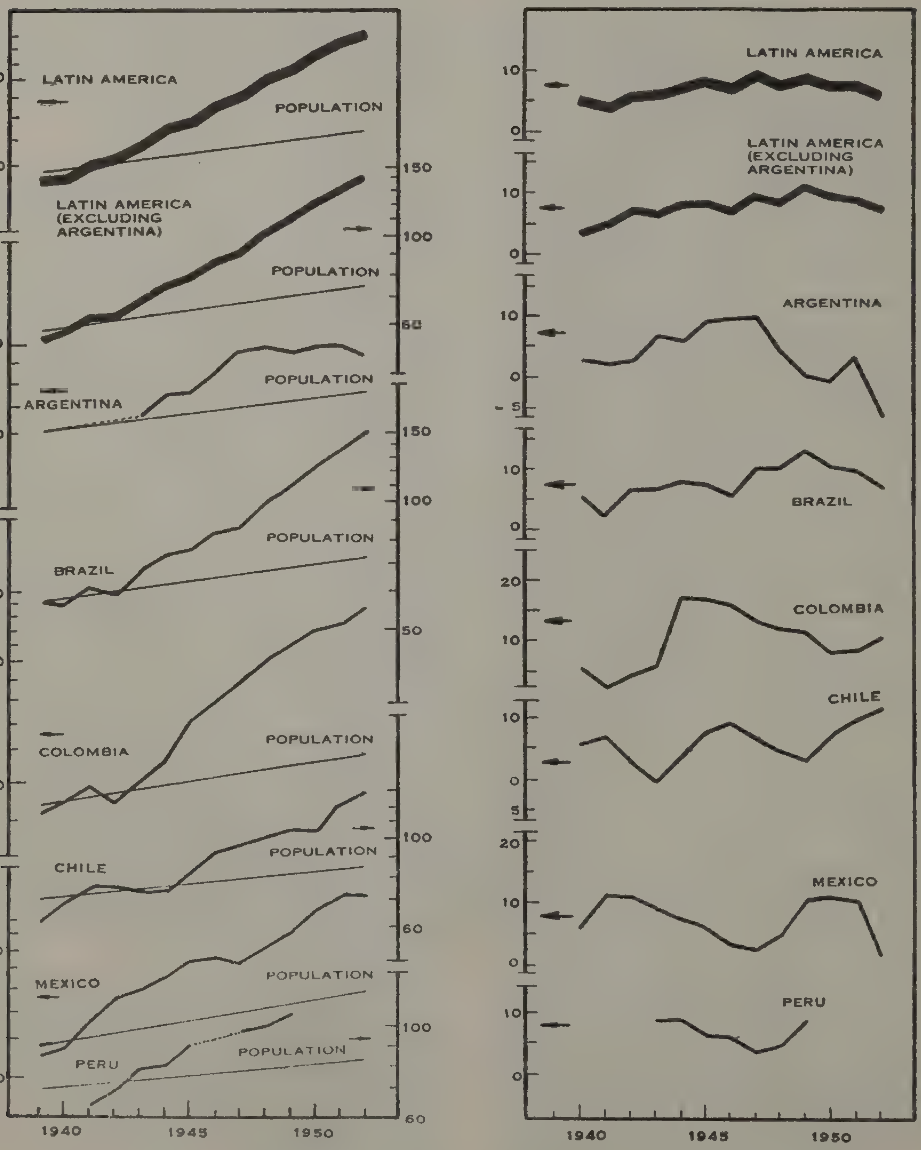
[1] United Nations Economic Commission for Latin America and Technical Assistance Administration, *Study of the Iron and Steel Industry* (E/CN.12/293).

Plate 47

DEVELOPMENT OF MANUFACTURING INDUSTRIES IN SELECTED COUNTRIES OF LATIN AMERICA

Indices and rates of change



Indices 1948 = 100
(Semi-logarithmic scale)

Annual rates of change
Moving three-year averages
(Natural scale)

an increasing proportion of the demand. The secondary cement industries have also shown a considerable increase.

The manufacture of basic chemical products, such as caustic soda, sulphuric acid and fertilizers, has been the object of considerable investment, and also antibiotics and other pharmaceutical products. The preparation of soda ash by the Solvay method has been commenced in Colombia. The paper industry, especially in Brazil and Mexico, has shown marked production increases, although at times there have been difficulties in the pulp supply. Projects for developing cellulose manufacture in these two countries, and also in Argentina, clearly indicate the increasing importance of this industry in Latin America.

Industrialization is nevertheless meeting with a series of structural obstacles which are not yet being countered by a sufficiently co-ordinated and energetic policy. One of these obstacles is the shortage of electric power, common to almost the whole region, which cannot be satisfactorily overcome by the projects at present being carried out, nor by those for the immediate future.

Transport difficulties caused by inadequate equipment, or by the poor conditions under which it is working, affect the supply of raw materials and fuel, increase costs by obliging the maintenance of abnormally high stocks, or cause industries to be located in unsatisfactory areas. The lack of modern means of transport in many zones prevents an increase in the markets for industrial products. The markets, influenced by unequal distribution of income, are often unable to absorb consumer goods produced by industries which give most employment, such as textiles, for example.

Although these problems of Latin-American industrialization are not the only ones of a general domestic nature, they are sufficient to indicate that an increased rate of industrial growth needs a greater co-ordination between the various aspects of general economic development and the different industrial sectors. It is increasingly necessary that industrialization policy should anticipate the supplementary investments that any given levels of investment in industry may cause in other sectors of the economy. A lack of adequate planning results in production falling below capacity, so that substantial investments are lying idle for long periods. Within the same industrial sector there are similar phenomena of a lack of inter-industrial co-ordination and vertical integration. For example, the development of steel production capacity has not always been adequately related to rolling capacity or to the supply of raw materials or fuel; paper and similar industries have been developed without undertaking domestic production of pulp, or the corresponding raw material, on a sufficient scale. In many cases the establishment of industries has greatly increased the load on foreign exchange budgets through requirements for imported raw materials, which, with sufficient forethought, could have been produced domestically. It is thus indispensable to know and to plan with greater care the industrial interrelationship at the same time as these activities are being developed. Among the events reviewed below it may be observed that important gaps are being filled in several countries and that a better supply of the necessary raw materials is being ensured. The contrast between the situation in various Latin-American countries, as regards the evolution of their industrial production and the prospects for new investments, emphasizes that they are still far from maintaining a co-ordinated rate of increase which is able to ensure that the maximum advantage is taken of investments.

2. THE SITUATION AND PROGRESS IN SELECTED COUNTRIES

(a) *Argentina*

For some months in 1952, Argentina's industry showed signs of depression. The immediate causes were partly the demand resulting from the agricultural crisis, the

Table 151. Argentina: Quantum of industrial production
(1948 = 100)

	1947	*1949*	*1950*	*1951*	*1952*[a]	*Percentages*	
						Annual cumulative increment 1947–51	*Variation 1951–52*
TOTAL	*98.7*	*96.3*	*99.3*	*101.7*	*94.3*	*0.7*	*− 7.3*
Non-durable goods	*95.8*	*99.8*	*103.2*	*103.5*	*95.3*	*2.0*	*− 7.9*
Foodstuffs and beverages	105.4	101.1	103.4	99.7	102.1	− 1.2	2.4
Tobacco	94.7	107.1	104.3	107.7	114.5	3.2	6.3
Textiles	90.5	104.0	101.0	100.2	82.3	3.5	−17.9
Clothing	81.0	96.2	86.3	81.4	72.6	0.1	−10.8
Paper and cardboard	94.4	97.9	112.7	123.2	106.2	6.9	−13.8
Printed matter and publications	92.5	92.4	105.5	89.8	64.1	− 0.7	−28.6
Chemical products	101.3	99.8	109.5	113.5	102.0	2.8	−10.1
Petroleum derivatives	86.3	100.6	124.6	123.6	133.8	9.3	8.3
Rubber	102.4	89.2	82.2	117.7	121.8	3.4	3.5
Leather	92.8	92.0	92.4	89.7	76.3	− 0.7	−14.9
Durable goods	*104.2*	*90.4*	*92.4*	*98.7*	*92.4*	*− 1.2*	*− 6.4*
Stone, glass and ceramics	100.1	105.4	111.1	108.8	98.6	2.1	− 9.4
Wood	95.5	89.8	92.1	91.4	79.4	− 1.0	−13.1
Metals excluding machinery	90.9	101.4	108.6	114.2	89.4	5.9	−21.7
Vehicles and machinery (excl. electrical)	125.4	74.9	68.8	79.0	87.7	−10.3	11.0
Electrical machinery and apparatus	71.2	101.3	116.2	130.0	146.5	19.3	12.7

Source: Síntesis Estadística Mensual, Buenos Aires.

decline in exports, and the deflationary measures adopted by the government at the beginning of the year. But they were also due to factors of a more general economic order, which became more serious, after progressively increasing during previous years. Industrial production in 1951 was only 1.7 per cent higher than that of 1948, when output reached its peak since the war, to be followed by declines during 1949 and 1950. (See table 151.)

The 1952 decrease appears to have begun in February, coinciding with restrictions on public spending and an intensive campaign for the reduction of private consumption. These measures had no immediate or serious effects upon industry, owing to the inertia of production and official attempts to maintain factories in operation. In April, however, and more especially from June onwards, there was a considerable decline in manufacturing output, which became more marked in the following months. There was a certain degree of recovery towards the end of the year and it was expected that the outstanding improvement of the 1952-53 harvests would have a favourable effect, in addition to hopes aroused by the second five-year plan.

In April 1952, the generation of electric power fell below the figure for the corresponding period of the previous year. The strict rationing, introduced in March as a result of the poor prospects for fuel imports, obliged industrial establishments in the Federal Capital and in the Province of Buenos Aires to suspend work for one morning per week in turn, as well as other measures to reduce consumption. Industrialists, anxious to decrease production to avoid increasing stocks, more than complied with the rationing regulations; as a result, it may be estimated that during the second half of the year power consumption was 10 per cent below the same period of 1951.

Simultaneously, wholesale and retail sales declined, thus throwing the whole burden of the problem of excess stocks on industry.[2] This accumulation of stocks, calling for greater credit, placed many industrial concerns in financial difficulties and affected the regularity of payments.

There was no general industrial unemployment, although it appeared to a limited extent from June 1952 onwards; the policy adopted by trade unions, however, favoured a reduction of working hours rather than dismissal of workers, so that factory working weeks of only 30 to 32 hours were by no means uncommon. Apart from these short hours, unemployment may have occurred in some industries, although this was not always apparent.

The sector most affected by the crisis was the textile industry, especially woollens, although its effects were also felt by the cotton and rayon industries. From March, the aggregate output of textiles commenced to descend substantially, the decline accelerating in the second half of 1952 and by November production was 39 per cent lower than in November 1951. Total output for 1952 stood at 18 per cent below that of 1951. Production of carded wool was stopped, weaving mills working on a narrow margin had to close down, and some textile mills were compelled to reduce working hours.

The leather industry was also severely affected by the crisis, showing output figures 15 per cent lower than those for the previous year. There were sharp reductions in the sale of footwear and tanned leather, and a number of factories worked only half the week. The manufacture of less essential items such as saddlery and travelling goods was considerably curtailed. The paper and cardboard industries were also faced with difficult conditions, which in turn were affected by the situation in other industries and resulted in the output for November 1952 being 30 per cent lower than the previous year. Similar phenomena appeared in the wood manufacturing, light metal-working and printing industries. Sales of durable household articles, especially electrical equipment, declined and almost all recently established firms were compelled to suspend their output.

The production of construction materials was also reduced in 1952 as a result of the slower building rate. although the cement industry—despite a sharp decline during the third quarter—recovered towards the end of the year, so that output for 1952, as a whole, was perhaps only slightly lower than that of 1951 (see table 152). The proportion of cement used in public works—36 per cent in 1951—rose during May 1952 to 37 per cent, followed by a gradual reduction to 24 per cent in December, with an average of 31 per cent for the whole year. Although, under the government plan for greater economy, no tenders for public works were requested in 1952, those already under construction were continued, and these, together with the deferred demand of previous years, were sufficient to ensure that no reduction in cement consumption occurred during the year. In fact, some imported cement must have been used in addition to the quantities produced domestically.[3]

Certain industries not directly associated with consumption suffered less; no reduction in the production rate of

Table 152. Argentina: Production and consumption of cement
(Thousands of tons)

Years	*Production capacity*	*Production*	*Imports*	*Apparent consumption*	*Percentage annual increase of consumption*	*Percentage of consumption covered by production*
1947	2,021	1,353	100	1,453	27.4	93.1
1948	2,021	1,252	332	1,584	9.2	79.0
1949	2,021	1,446	197	1,643	3.7	88.0
1950	2,021	1,558	459	2,017	22.8	77.4
1951	2,021	1,543	429	1,972	−2.2	78.3
1952	2,141	1,539	483	2,022	2.5	76.1

Source: Asociación de Fabricantes de Cemento Portland de Argentina.

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[2] In some items the reduction of sales reached 60 per cent of the previous year's figures; in others it was not so great, but with few exceptions the decline was general.

[3] Imports for 1952 stood at 483,000 tons.

heavy industry, for instance, was apparent. The manufacture of tyres and other rubber products met with no difficulties apart from a certain shortage of raw materials.

The events of 1952 lead to a review of certain characteristics of the prevailing industrial development pattern in Argentina.

The quantum of industrial output increased at an average annual rate of 5 per cent between 1937-39 and 1946, and even further during 1947-48. This production increase was possible because a high proportion of capital goods imports were for industrial purposes. Industry was enabled to supply itself thoroughly with machinery, equipment and motors, and thus overcome many of the difficulties resulting from abnormal wear and tear during the war years, when replacements were not available.

This uneven distribution of imported capital goods, which aided industrial expansion, eventually caused problems through the decline of purchasing power in other sectors. When Argentina's economic policy once more turned towards agriculture and livestock in 1948—due to the necessity for increasing exports and for meeting greater domestic demand—industry was still obliged to maintain a high level of capital goods imports, at least as regards spare parts and supplementary equipment, in order to sustain or accelerate the previous production rate.

Domestic production of machinery and electric motors was 50 per cent higher in 1951 than in 1946—mainly due to a 600 per cent increase in the manufacture of electric motors—but imports are still necessary, not only because production is insufficient to meet domestic demand, but also since a high proportion of imported raw materials is required.

The changes in Argentina's economic policy mentioned earlier affected the availability of credit, which was not extended to industry on the same scale as formerly. This credit restriction, in the midst of increasing inflationary conditions, caused difficulties for private firms, which had to use their financial resources almost exclusively as working capital. As from 1949, the Banco de Crédito Industrial Argentino, which had previously financed industrial expansion, suspended all loans for the installation or enlargement of plants, other than those which were in the national interest, or those generally included in official planning. Consequently, there has been a strong and progressive reduction in private industrial investments, especially during the past two years.[4]

The high level of production attained by industries manufacturing consumer goods, which has enabled a large number of imported finished commodities to be substituted by domestic products, underlines the need to increase basic and production goods industries. The government's second five-year plan, 1953-57, was formulated with this economic development policy in view.

A considerable expansion is planned for the iron and steel industry, with a production target of 640,000 tons for pig-iron in 1957, an increase in iron and steel castings of 100 per cent over the present figure of 120,000 tons and a 500 per cent rise in the production of steel for rolled and drawn products. A first step in this direction was the contract to equip a coking plant at San Nicolás with a capacity of 2,000 tons daily. The expansion planned in the output of rolled products—which, between 1948 and 1951, increased by 80 per cent to some 280,000 tons—together with drawn products, will make a combined total of one million tons.[5] Seamless steel tubing will also be produced to meet domestic requirements of 40,000 tons annually.

The heavy chemical industry will also be extended in several branches and there are plans for a productive increase of 194 per cent above the 1951 figure of 100,000 tons for basic acids and alkalis. This is more than the present consumption requirements, leaving a surplus for the manufacture of soda ash to be commenced. At the same time production of other chemicals, plastic and pharmaceutical items, and fertilizers, will be initiated or amplified.

The manufacture of motor vehicles will be begun, by a government corporation, with the production of a number of different models at an estimated annual rate of 5,000 units, plus 2,500 motorcycles. Work has already begun on the production of sufficient tractors to supply 50 per cent of domestic requirements. Surveys have been made covering expansion in the manufacture of agricultural and industrial machinery, motors and other electrical equipment.

The capacity of the cement industry has remained stationary of some 2 million tons since 1940; a 500,000 ton expansion is projected, although this will not fully exclude imports, which have risen to over 400,000 tons annually for the past three years.

According to official plans, the production of newsprint will rise to 50,000 tons (108 per cent higher than present capacity) covering part of the consumption which amounted to 109,000 tons in 1951, although this total was well below earlier maximum levels. The output of other types of paper will increase to 230,000 tons (51 per cent higher than 1951) and that of cardboard and pasteboard to 125,000 tons (47 per cent higher than 1951); the combined consumption of the latter items at present stands at 320,000 tons. There are also plans to increase the present 7,000 tons of mechanical pulp to 50,000, and the 34,000 tons of chemical pulp to 135,000. This will not eliminate import requirements, since the production of paper mentioned above will require 76,000 tons of mechanical pulp and 202,000 tons of chemical pulp.

It is proposed to increase the production of dissolving pulp from the present 5,500 tons to 18,000 tons, a figure which will entirely fill the demand for both the existing rayon industry and the projected enlargements to it.

(b) *Brazil*

Although influenced by events abroad and by the abnormal volume of imports during 1951, Brazil's industrial position in 1952 generally displayed features favourable to the consolidation of the progress which had been achieved during the war and the immediate post-war period. Since 1948, there has been a rapid rate of industrial expansion, due to the growing domestic market and the protectionist policy imposed by the chronic shortage of foreign exchange. The rate of industrial growth continued in 1951, notwithstanding a heavy volume of imports, and eased only slightly in 1952. There was a continued increase in the production capacity of several basic industries, while a substantial number of new projects, tending to fill large gaps in the industrial structure, have been undertaken.

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[4] Between 1948 and 1951, the establishment of foreign industries in Argentina, almost all European, resulted in the introduction of machinery to a value of 250 million pesos. In 1951 this had fallen to 19 millions, and more recently no new applications have been made.

[5] Although the plan's target provides for a considerable increase in domestic production, imports of rolled products will still be necessary to meet the present consumption of 1,200,000 tons. The same applies to pig-iron and steel, output of which will not provide the amount required for rolled products, on a conservative estimate of the scrap supply.

Serious problems, inherent in a period of rapid growth, have been encountered. Shortage of electric power, due to difficulties in increasing generating capacity at the rate required by the potential demand, resulted in rationing in 1952. This particularly affected industrial output in São Paulo and Rio de Janeiro, tending to discourage the establishment of new industries in those areas. Generating capacity in other regions was also inadequate. Both official and private efforts have been intensified to meet this situation, and increases of power production are being encouraged in various parts of the country. These plans do not, however, provide solutions of an immediate nature.[6]

Another factor which affects Brazilian industrialization is the shortage of foreign exchange, which has continued for several years, with only substantial relief in 1951. In the same year the export boom enabled the purchase of all the foreign commodities necessary to avoid any interruption in the rates both of manufacturing output and building. There was only temporary relief for the basic problem of maladjustment in various industrial sectors. However, the instability of foreign exchange income—which reappeared in 1952—and the primary need to use it for importing fuel and machinery, has emphasized the possibility that industrial momentum may be reduced owing to a scarcity of imported raw materials. The ever present insufficiency of domestic fuel supplies also continues to place Brazilian industry on an insecure foundation, which might at any time become serious. The slow development of transport, which, in 1951 and 1952, acquired a somewhat greater momentum, entails extensive and costly renewal of railway equipment and rolling stock. This situation continues to have a greater influence each year on import figures, as long as domestic production of coal and petroleum fail to reach the necessary level.

Judging from partial data, Brazil's manufacturing output rose by 6.5 per cent in 1952. During 1951, the general increase amounted to 7.7 per cent, compared with 13 per cent in 1950. (See table 153.) Since 1949, there has been a greater expansion in industries producing capital goods than in those for consumer goods, although production of the former has in some cases reached the limit of capacity. The productive increase for industries producing capital goods was 7 per cent greater in 1952 than in 1951, but lower than that of preceding years by 20 per cent. (See table 154.) Steel output in 1952 is estimated at more than 960,000 tons, exceeding the 1951 figure by 14 per cent, whereas finished steel products, based partly on imports, amounted to 720,000 tons. Production of railway rolling stock has increased, together with output of motor vehicle coachwork, agricultural implements, textile machinery, apparatus for industrial use, and so on. In the case of cement—the basis for construction materials and the building industry—there was a recovery, in 1952, of the rate of increase of production, through the substantial increase in capacity planned previously, viz., from 1,862,000 tons to almost 2,500,000 tons. Whereas in 1951 production rose by only 4 per cent, owing to deficiencies in capacity, the estimated 1952 figure of 1,600,000 tons was 11 per cent higher than that of the previous year. The chemical industry also shows increases in its basic products, such as caustic soda and sulphuric acid.

Most of the principal sectors in the production of consumer goods experienced favourable conditions during 1952, due to the strong incentive provided by the general high level of income. Production of paper, rubber products (tyres and inner tubes, etc.), domestic appliances, processed foodstuffs, and so on, continued to rise beyond the already high levels reached in 1950 and 1951. (See table 153.) By contrast, the textile and leather industries, in 1951, achieved a rate of output only slightly higher than that for 1948-50, without recovering—or only barely exceeding—the maximum levels of the war years, which had been surpassed from 1946 onwards in almost all other industries. Textile output declined in 1952 due to difficulties in exporting finished goods.[7]

The renewed momentum of industrial investments in Brazil, together with that of Mexico, is one of the most substantial in Latin America. It is expressed by the exceptionally large number of projects initiated or drafted in 1952, leading to the manufacture of new products, in addition to the enlargement of existing industries. Although much of the initiative is of domestic origin—either public or private—the participation of foreign capital or technical skills has been of prime importance to a large number of these projects. Capital from several European countries is, for the first time, playing a prominent part. Moreover, some of the projects are helping to industrialize and to diversify the products of areas in the interior of the country.

Table 153. Brazil: Quantum indices of manufacturing output

(1948 = 100) [a]

Years	*General index*	*Percentage annual increase*	*Consumer goods*	*Percentage annual increase*	*Capital goods*	*Percentage annual increase*
1947	86.0	–	87.6	–	83.2	–
1948	100.0	16.3	100.0	14.1	100.0	20.2
1949	110.3	10.3	104.0	4.0	121.3	21.3
1950	124.6	12.9	112.0	7.7	146.2	20.6
1951 [b]	134.1	7.7	123.0	9.9	153.4	4.9
1952 [c]	143.0	6.5	131.0	6.4	164.8	7.3

Source: Economic Commission for Latin America, based on official statistics.

[a] 1948 weights.

[b] Preliminary figures, partly estimated.

[c] Estimated.

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[6] See part III, chapter IV, section 2, Electric Power.

[7] The tonnage of 1951 exports was barely 10 per cent of that in 1947, the last year in which textile exports reached a high level.

Table 154. Brazil: Quantum indices of industrial output (1948 = 100) [a]

	1947	*1949*	*1950*	*1951*	*Percentage cumulative annual increase 1947–51*	*Percentage increase 1950–51*
CONSUMER GOODS						
Textile industry	*87.3*	*101.5*	*107.1*	*119.1*	*8.0*	*11.2*
Foodstuffs, beverages and tobacco	*90.0*	*146.8*	*105.3*	*120.2*	*7.5*	*14.2*
Sugar	86.7	97.9	99.5	122.8	9.1	23.4
Meat	89.0	104.6	105.2	109.4	5.3	4.0
Wheat flour	107.0	110.7	136.8	143.7	7.6	5.0
Dairy produce	98.4	114.8	124.5	130.7	7.3	5.0
Wine	87.8	114.0 [b]	115.6 [b]	147.0 [b]	13.8	27.2
Tobacco	77.4	93.6	75.3	78.5	0.2	4.2
Other industries	*85.3*	*108.7*	*123.3*	*129.2*	*11.0*	*4.8*
Vegetable oils	72.4	101.1	112.0	117.7	12.9	5.1
Paper	92.0	116.2	133.4	139.8	10.0	4.8
Rubber	78.2	108.6	121.7	126.0	12.7	3.5
Manures	80.0	85.0	105.0	110.0	8.3	4.8
Petroleum refining	89.1	109.1	120.0 [b]	125.5	9.0	4.6
Hides and skins	71.0	107.8	109.2	114.4	12.7	4.8
Printing	100.7	112.6	134.1	140.7	8.7	4.9
CAPITAL GOODS						
Metallurgy	*77.1*	*126.3*	*159.1*	*167.0*	*21.3*	*5.0*
Iron and steel	73.7	125.5	154.6	162.2	21.8	4.9
Mechanical	80.1	127.3	163.4	171.5	21.0	5.0
Building materials	*99.3*	*106.9*	*110.1*	*115.4*	*3.8*	*4.8*
Cement	82.3	115.2	124.6	130.7	12.2	4.9
Lime	84.6	38.2	42.7	44.8	−15.2	4.9
Wood	107.9	113.0	113.6	119.1	2.6	4.8
GENERAL INDEX	*86.0*	*110.3*	*124.6*	*134.1*	*11.7*	*7.7*

Source: Economic Commission for Latin America, based on official statistics.

[a] 1948 weights.

[b] Preliminary figures, partly estimated.

The iron and steel industry, which had a capacity of about a million tons of ingot steel at the end of 1951, is expanding substantially with enlargements already under construction. The capacity of the Itabira plant, which uses charcoal as a reducing agent, was increased to 50,000 tons in 1952. Other plants in São Paulo and Minas Gerais are undertaking similar projects. One of these has been commenced in Minas Gerais, with German participation, in order to build a rolling mill—which will make seamless tubing, among other products—with a projected initial output of some 100,000 tons a year, which will improve the supply position against a consumer demand exceeding 900,000 tons, including tubing. The Volta Redonda plant, which is the largest in Latin America, will double its capacity during the second half of 1953, to produce 700,000 tons of ingot steel, and it is fulfilling a programme which it is hoped will provide a total capacity of a million tons by 1957. Altogether, rolled steel consumption in Brazil continues to increase rapidly, and was estimated at 1.1 million tons in 1951, of which some 36 per cent had to be imported. Imports in 1952 still had to cover about one third of a similar domestic consumption. (See table 155.) In view of the above plans, it is likely that, in a few years, Brazil will be self-sufficient as regards steel supplies, except for specialized products.

In 1951 and 1952, the increasing supply of steel and other favourable factors caused substantial expansion in the metal industries, while new plants of various types are being planned. Because of their importance to the development of other activities, stress should be laid on the manufacture of railway rolling stock, diesel engines, centrifugal pumps, agricultural implements, oil-extracting machinery, internal combustion engines, heavy electrical equipment, lathes, boilers, equipment for the petroleum industry, textile machinery, coachwork for lorries and so forth. In several cases, the export of a proportion of such production is anticipated, or has already begun. A German firm is at present investigating the manufacture of locomotives in the country. Two large motor vehicle and lorry assembly plants have expanded their capacity, and negotiations are under way for the establishment of new industries, some of them with European participation. Domestic appliances, such as refrigerators, have begun to be manufactured, whilst plans are being made for the

Table 155. Brazil: Production, imports and apparent consumption of steel [a] (Thousands of tons)

Years	*Production*	*Imports*	*Apparent consumption*	*Percentage of consumption covered by production*
1947	297	477	774	38.4
1948	404	236	640	63.2
1949	506	248	754	67.0
1950	623	252	875	71.3
1951	710	396	1,106	64.2
1952	720	380	1,100	65.5

Source: Economic Commission for Latin America on the basis of official data. See E/CN.12/293/Add. 1, 2, 3, 4 and 5.

[a] Rolled products, including wire, wire-products and tubing.

[b] Estimated.

Table 156. Brazil: Production, imports and apparent consumption of cement
(Thousands of tons)

Years	*Production*	*Imports*	*Consumption*		
			Total	*Percentage of annual increase*	*Percentage covered by production*
1947	914	339	1,253	7.0	73.0
1948	1,112	351	1,463	16.8	76.0
1949	1,281	434	1,715	17.2	74.7
1950	1,385	404	1,789	4.3	77.5
1951	1,441	656	2,097	17.2	68.7
1952	1,597	820	2,417	15.2	66.2

Source: Ministério da Fazenda e da Agricultura, Rio de Janeiro, and Economic Commission for Latin America.

production and assembly of sewing machines, office equipment, spares for vehicles, and so on. Earlier investments in equipment and in the training of technical staff are now bearing fruit in nearly all these projects.

In other branches of the metals industry, an important project is that for making ingots and other products of aluminium, using domestic raw materials; it is expected to produce 10,000 tons a year by 1953-54, in the initial stages. Present consumption of aluminium is 15,000 to 20,000 tons a year.

The new projects for cement production have been particularly important, in view of an apparent consumption of over 2 million tons annually in 1951 and 1952, and the need to import substantial amounts in both years in order to supplement domestic production (see table 156). There has been a tendency towards building larger, and therefore more economical, units than in previous years, and the industry has been more decentralized. In 1951 a plant with an annual capacity of 120,000 tons entered into operation in the Paraiba Valley, using blast furnace slag from Volta Redonda (the first of its kind in Latin America). A further plant with a 110,000 ton capacity was built in Porto Alegre. An increase of 637,000 tons in the capacity of some existing plants is among the projects completed in 1952. This helped to raise the potential capacity of the cement industry to almost 2.5 million tons, making it the largest in any Latin-American country. Also among the current cement projects is a new plant for 250,000 tons in the State of Rio de Janeiro, another for 100,000 tons in Bahía, and a third for 210,000 tons in Pernambuco. These investments in the cement industry—some of them aided by foreign capital—will help to save foreign currency and to provide a more adequate local and regional supply.

The manufacture of tyres and tubes, which reached the unprecedented figures of 1.5 million and one million units respectively in 1951, and rose by nearly 20 per cent in 1952, although it was necessary to import natural and synthetic rubber to cover the insufficient supply of domestic raw materials. This will continue for several years until the new plants enter into production, when Brazil should become self-sufficient in this raw material. The manufacture of tyres and tubes for bicycles also experienced considerable advances, doubling the 1949 production figures. There are projects for new tyre plants, and production of rayon cord for tyres has begun, using domestic raw materials.[8]

Chemicals constitute one of the basic Brazilian industries which has yet to expand sufficiently to meet the domestic demand, but here again, progress was made in 1951-52, notwithstanding some difficulties in obtaining imported raw materials, and the absence of immediate sources of electric power. There were new increases in production of caustic soda, which rose to over 8,000 tons in 1952, but this satisfies only a bare 10 per cent of domestic consumption. On the basis of two projects now being examined, it is anticipated that this problem will be solved, and at the same time soda ash will be produced, which had previously always been imported. One of these projects alone should produce an additional 20,000 tons of caustic soda. Similarly, projects are under way to manufacture sulphuric acid on a larger scale, using domestic raw materials—some 60,000 tons were produced in 1952 with imported sulphur—and it is expected to use this acid as the basis for a large fertilizer industry, which will also be considerably expanded.

During 1951-52, there was some expansion in secondary chemical industries such as plastics, anilines, paints and varnishes, insecticides and pharmaceutical products. Under this last item, mention should be made of new projects, employing United States capital, which will make Brazil the largest producer of antibiotics in South America. An Italian project is also being studied, for making DDT and other products in the São Paulo region. In 1953 a new factory for synthetic resins and their by-products will enter into production, while a project is being studied for making plastics, using castor oil.[9]

Further continued expansion has occurred in the paper industry, where output was estimated at 285,000 tons in 1951, as against 248,000 the previous year, which met some 75 per cent of total consumption; in addition, various expansions are being carried out. Two projects in the State of São Paulo envisage an annual capacity of almost 100,000 tons of newsprint, with another for 10,500 tons of paper using cane bagasse. Plans are also being studied for the manufacture of cellulose with a total capacity of 142,000 tons a year.

(c) *Chile*

In 1951, Chilean industrialization entered upon a new and important phase, with the opening of the iron and steel plant at Huachipato, which had been planned years before by the Corporación de Fomento (Chilean Development Corporation). With this source of supply, the development of heavy industry is now on a firm basis, and

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[8] There are two specific projects for producing dissolving pulp from eucalyptus, in which production might amount to some 27,000 tons a year, which is more than consumption requirements.

[9] This factory will be the second of its kind in the world, and would use a new process developed in France.

Table 157. Chile: General indices of industrial production
(1948 = 100)

Groups	1947	1949	1950	1951	1952	Percentage cumulative annual increase 1947-52	Percentage increase 1951-52
Food industries.	95.3	101.3	104.5	109.3	114.8	3.8	5.0
Sugar.........	97.1	109.9	109.0	110.1	123.6	5.0	12.3
Beer and soft drinks.......	96.1	104.6	103.9	103.8	121.9	4.9	17.4
Clothing.......	103.9	89.0	90.5	88.1	91.7	−2.5	4.1
Chemical industries........	96.5	101.3	102.5	113.9	117.6	4.0	3.2
Pig-iron.......	78.3	129.6	84.3	282.5	353.7	35.2	25.2
Gas, coke and pitch........	91.8	103.8	103.9	98.8	96.2	0.9	−2.6
Electric power..	92.9	109.9	130.4	144.2	160.6	11.6	11.4
Miscellaneous industries....	98.5	99.5	99.9	98.7	106.8	1.6	8.2
General indices excluding building.....	95.5	104.4	104.1	122.4	136.1	7.3	11.2

Source: Dirección General de Estadística de Chile.

steel production has advanced to the stage not only of providing a saving in foreign exchange, but also of becoming an export item, yielding the equivalent of 12.5 million dollars in 1952.

Nevertheless, the structure of Chilean industry still presents deficiencies and, as in other countries, encounters difficulties as regards the capacity of the domestic markets for some items, shortage of electric power and an unavoidable dependence upon imported raw materials and fuels.

In spite of these factors and the existing inflation, manufacturing output continued to increase during 1952 and there was no hindrance to industrial expansion, which consisted almost entirely of enlargements to the plants in operation. In 1952, there seemed to be a renewed momentum of industrial growth, to which the domestic iron and steel production largely contributed, as also did the programmes and achievements of the Corporación de Fomento in other sectors.

An active demand for industrial products continued and there were no sales problems, with the possible exceptions of textile products and clothing, which was a reflection of the world crisis, together with the insufficient purchasing power of the consumer to meet the high prices of these products. The difficulties directly due to the intense period of inflation through which Chile has passed—strikes for higher wages, disinvestment of the firms and the corresponding need for greater working capital—have not caused structural disturbances. On the whole, industry enjoyed ample credit from commercial banks.

During the winter of 1952, rationing of electric power in the central zone of the country became more severe and constituted the most serious problem for industrial output, since factories for the most part had to operate without public utility power once or twice a month.

During 1952, industrial production (including gas and electricity) increased 11.2 per cent over the average for the previous year. In 1951 the aggregate rise was 17.7 per cent.[10] (See table 157.) Production from the Huachipato iron and steel plant exerted a strong influence on the increase in the general indices. There was an upward trend in almost all the other industrial groups, although to a lesser degree. Increases of 25.2 per cent in the volume

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[10] Manufacturing output increased at an average annual rate of 4.5 per cent between 1947 and 1949. There was no change in 1950.

Table 158. Chile: Apparent consumption of iron and steel [a]

Years	Production [b]	Imports (thousands of tons)	Consumption	Percentage annual increase	Per capita consumption (kgs.)
1946..................	33	101.7	134.7	–	24.8
1947..................	36	109.5	145.5	8.0	26.3
1948..................	40	105.5 [c]	145.4	−0.1	25.9
1949..................	37	130.4 [c]	167.4	15.1	29.3
1950..................	53	111.5	164.5	−1.7	28.3
1951..................	122	93.2	215.2	30.2	36.4
1952..................	163	77.8	240.8	11.9	40.1

Source: Economic Commission for Latin America, based on data from the *Anuarios de Comercio Exterior* (foreign trade yearbooks) and Compañía de Acero del Pacífico.

[a] Finished products, including wire and wire products and tubing.

[b] Production for domestic consumption, excluding a number of exports, of which those from Huachipato were particularly significant, 20,262 tons in 1951 and 31,977 in 1952.

[c] Excluding imports of sections and structural steel for the installation of the Huachipato plant; total imports amounted to 113.9 and 155.5 thousand tons in 1948 and 1949 respectively.

Table 159. Chile: Production and consumption of cement

(Thousands of tons)

Years	*Production*	*Net imports and exports*	*Apparent consumption*	*Percentage annual increase in consumption*	*Percentage of consumption covered by production*
1947	602.3	−1.6	600.7	2.7	100.4
1948	539.8	0.1	539.9	−10.1	100.0
1949	495.2	1.5	496.5	−8.2	99.8
1950	603.2	−8.6	594.6	19.7	101.5
1951	698.5	−84.9	613.6	3.2	114.0
1952	818.0	−42.7	775.3	26.6	105.2

Source: Estadística Chilena and *Anuarios de Comercio Exterior*. As from 1950, figures have been added to cover the production of a new factory which is not included in official statistics and which began operations in that year.

of production of pig-iron, and 10 per cent each in sugar refining, electric power, beer and soft drinks, were particularly notable. There was also an increase in the manufacture of foodstuffs, chemical products, glass, paper and cardboard, jute and hemp goods and clothing. Production of tyres in 1952 reached 164,000 units and exceeded by 53 per cent total production for the previous year.

With the Huachipato plant in regular operation, production in 1951 amounted to 240,000 tons of pig-iron, 178,000 tons of ingot steel and 126,000 tons of finished products (bars, light sections, wire rod, strip, plate and tinplate). These figures were considerably exceeded in 1952, when the amounts were: 270,000 tons of pig-iron, 243,000 tons of ingot steel and 181,000 tons of finished steel. It is anticipated that output in 1953 will rise to 300,000 tons of steel and 250,000 tons of finished steel. The expansions planned will not only supply domestic requirements, which have risen rapidly, but will also permit increases in exports of iron and steel products, particularly to Argentina. (See table 158.)

The availability of products from the Huachipato plant is resulting in considerable progress in the iron and steel transforming industry. Apart from expansions in the rolling mills for flat products, and in the iron and steel plant itself, manufacturing capacity is being installed for wire, carbide, ferro-alloys, centrifugal tubes, doors, windows and light sections. There is also a plan for the formation of a centre for semi-heavy metallurgical industries with structural steel shops, mechanical workshops, forgings, assembly of farm machinery, etc., as well as the production of rails and railway rolling stock.

The entry into production of a third cement plant in 1950 caused a sharp rise in output, so that Chile was able to become an exporter of considerable quantities of cement. Output—which in 1950 was the same as in 1947—rose 16 per cent in 1951 and by a similar margin in 1952, reaching 818,000 tons a year. (See table 159.) Eighty-five thousand tons were exported in 1951 and 43,000 in 1952. In June 1952, an agreement was reached to export 200,000 tons of cement to Argentina. Linked with the iron and steel undertaking at Huachipato, another cement plant is planned which may operate by 1955.

Either directly, or with the support of private firms, the Corporación de Fomento has fostered other branches of industrial activity. A beet-sugar plant is in course of construction, having a capacity of 10,000 tons a year, which will allow domestic production to cover at least a small part of consumption. A cellulose plant is projected, for 30,500 tons a year, and another for newsprint of 20,000 tons annually. At the same time, it is planned to encourage the timber industry, to which a United Nations specialized agency, the Food and Agriculture Organization, is contributing technical advice.

Apart from the sector related to the Corporación de Fomento, other plants have been installed or are in the planning stage. The copper smelter at Paipote came into operation in January 1952, producing 15,000 tons of blister copper, mainly for export. A plastic cloth factory was installed in 1951, together with others for writing paper, mechanical pulp and pencils. A zinc oxide and a penicillin plant are in course of construction, and the production of antibiotics is under study, with a plant for nicothibyne and another for chloromycetin. A German proposal to install a factory for fish meal and oil is also being considered.

(d) *Colombia*

After the crisis through which Colombia's industry passed in 1951, and which notably affected consumer goods industries, particularly those which were more dependent on imported raw materials, the main industrial sectors recovered their normal rate of growth in 1952. Simultaneously, new basic industries entered into operation, particularly chemicals, which will begin to replace imports. Industrial improvement in 1952 was favoured by a protectionist policy of direct restrictions on imports and by the more rapid general momentum imparted by the government to large-scale works and projects. Such measures helped to bring about a return to normal conditions in the sales volume and also to reduce the stocks accumulated during the second half of 1951.

The readjustment of 1952 originated in the anti-inflationary monetary policy introduced towards the end of 1950 and in the devaluation of the Colombian peso in 1951. Industry had been seriously affected by an increase in the cost of raw materials and machinery, and a slackening in effective demand, to which the bad harvests of 1950 contributed. In some sectors—particularly in woollen and cotton textiles—unemployment occurred, together with reductions in working hours.

The quantum of industrial production [11] was increased by 10.5 per cent in the first half of 1952, compared with

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[11] Excluding production of coffee mills, which form an important part of the whole. This is an export activity, related to farming, which fell 21 per cent in 1950, increasing by 43 per cent in 1951 and by 3.4 per cent in the first half of 1952 as against the previous year's average.

Table 160. Colombia: Indices of industrial production

(1948 = 100)

Groups	*1949*	*1950*	*1951*	*1952*[a]	*Percentage of cumulative annual increase*	*Percentage increase 1951–52*
Foodstuffs	108.8	107.3	126.8	130.6	8.2	3.0
Rubber and similar products	126.7	141.7	130.3	138.3	9.2	6.1
Beverages	113.6	138.9	139.5	155.8	11.7	11.7
Leather	97.3	106.8	101.9	102.1	0.5	0.2
Metallurgy	64.7	104.7	95.2	175.0	−1.2	82.7
Non-metallic ores	122.5	132.8	147.3	174.9	13.7	15.0
Chemical and pharmaceutical products	126.2	148.7	153.4	190.2	15.3	23.9
Tobacco	105.8	114.5	130.3	127.6	9.2	−2.1
Textiles	103.3	110.3	104.7	121.6	1.5	16.2
Total industrial production	109.1	120.5	124.8	137.2	7.6	10.0
Foodstuffs (excl. coffee mill production)	107.0	117.0	126.4	129.7	8.1	2.6
Total industrial production (excl. coffee mill production)	108.8	123.8	124.5	137.6	7.6	10.5

Source: Economic Commission for Latin America, basic data from the Dirección Nacional de Estadistíca, of Colombia.

[a] First six months.

the average for the previous year. In 1951 there had been practically no increase, after an upward trend of 8.8 and 13.8 per cent respectively, in 1950 and 1949. This recovery during the first half of 1952 was common to all industrial groups. (See table 160.) Rubber and similar commodities, metallurgy and textiles — which had fallen respectively in 1951 by 8 per cent, 9 per cent and 5 per cent—rose 6, 84 and 16 per cent, in that order, in 1952. In the rubber industry, tyres formed the outstanding item with an increase of 17 per cent, whereas textiles showed a general rise in woollen, cotton and rayon yarns and cloth. Other groups in which the rate of growth increased with respect to the previous year include the production of beverages, non-ferrous metals and the chemical and pharmaceutical industries, which rose respectively by 2 per cent, 19 per cent, 18 per cent and 16 per cent in 1952. Paints and varnishes were partcularly important in the chemical industry, together with the manufacture of matches, in which 1948 production was almost quadrupled. Cement production, which has progressively expanded, continued to increase in 1951 and 1952—although at a lower rate than the average for 1948-50—achieving by 1952 an output of 704,000 tons, that is, slightly more than double the 1947 volume. (See table 161.)

The production rate for food industries[12] fell from 8 per cent in 1951 to 2.6 per cent. The leather industries, which in 1951 had fallen 4.6 per cent, remained stationary in the first half of 1952, while tobacco production fell somewhat after the sharp upswing of the previous year.

The development of basic industries—many of them encouraged by the government—is an indication of Colombia's transition towards a more advanced industrial structure. Towards the end of 1951 a plant having an annual capacity for 36,500 tons of soda ash, using the Solvay[13] system, for 9,000 tons of caustic soda for 4,400 tons of bicarbonate, came into production. It will almost entirely cover the country's alkali requirements.

Manufacture of sulphuric acid and superphosphates has increased, and is beginning to cover domestic demand. Paz de Río will produce, as a by-product, over 25,000 tons of 18 per cent phosphate slag, for use as a fertilizer. Enlargements are being studied for the chlorine plant, which earlier supplied the entire domestic consumption and part of Venezuela's needs; however, the increase in demand has rendered an expansion necessary. Some of these

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[12] See preceding footnote.

[13] At the beginning, the firm had serious sales problems, particularly as regards soda ash. This was undoubtedly due to the abnormal imports effected during 1951 to build up stocks.

Table 161. Colombia: Production and consumption of cement

(Thousands of tons)

Years	*Production*	*Imports and exports*	*Apparent consumption*	*Percentage annual increase in consumption*	*Percentage of consumption covered by production*
1947	346	117	463	–	74.7
1948	364	43	407	−12.1	89.3
1949	475	23	498	22.4	95.4
1950	567	−19	548	10.0	103.5
1951	648	−10	638	16.4	101.5
1952	704	−5	699	9.5	100.8

Source: Revista del Banco de la República, Colombia.

projects are leading to an industrial integration which is of great importance to Colombia. Based on domestic production of soda ash, for instance, a factory is to be installed making sheet-glass and glass containers. Another project about to be undertaken is a plant for refined salt, with lower production costs.

The new momentum towards investment can also be noted in other sectors. The main paper and cardboard mill is carrying out an expansion intended to meet domestic consumption of kraft paper and cardboard. The cement industry, which grew very rapidly, is now planning new capacity increases. The textile industry is beginning to pass through an evolutionary stage, characteristic of several Latin-American countries. Output of rayon yarn and cloth, which was not adversely affected by the crisis of 1951, is now to be increased. A plant for acetate yarn, using imported raw materials, began operation in 1952, with an annual capacity of 1,500 tons, representing an investment of approximately 8 million dollars. Moreover, an expansion project is under way for a viscose rayon yarn plant.

The outstanding change which is about to take place in Colombian industry is the establishment of the Paz de Río iron and steel plant. Construction of this plant began in 1950 after many years' study and preparation. Initial production of 126,000 tons of finished products, on the basis of a blast furnace having a capacity for 500 tons of pig-iron a day, and the use of raw materials located within a radius of 50 kilometres from the plant, will permit Colombia, as from 1954-55, to replace most of its iron and steel imports, at a saving of over 12 million dollars a year; imports will still continue, however, owing to consumption increases.

But Colombia's industry is facing substantial adverse factors. One of these is the shortage of power, for which no adequate solution is yet in sight, partly owing to the lack of a national electrification plan. Nevertheless, transport constitutes the most serious problem. Due to the topography of the country, the question of transport hampers the creation of an integrated domestic market, and results in high costs for shipping merchandise. It is anticipated that the programme for modernizing and enlarging the railway system, as well as the rebuilding and extension of highways, will assist in strengthening the domestic market during the next few years. Conversely, Colombian industry is succeeding in attracting both domestic and foreign capital to a greater extent than formerly. During 1951-52, the number of firms with capital invested from both sources was striking. Much the same as in other Latin-American countries, a new tendency is apparent for the investment of European capital, which is seeking opportunities in the chemical and iron and steel industries, as well as in the manufacture of metals and even textiles.

(e) *Ecuador*

Due to the over-all situation of economic development,[14] which has yet to cause an appreciable widening of the domestic consumer market, Ecuador's industrial progress has been slow in recent years. It is almost entirely dependent upon the annual results of agricultural activities. There was a decline in textile production, which is the principal industry, at the beginning of 1952, through an accumulation of stocks which followed the poor 1951 harvests.

Nevertheless, there is some progress in Ecuador, tending towards an industrial expansion for basic consumer goods. A new flour mill came into operation in mid-1952, with a capacity for 22,000 tons a year. This raised the total capacity of the milling industry to 70,000 tons, based on imported wheat, and it is anticipated that future increases in consumption can be met, since the new mill is at present working at only 20 per cent of capacity. New investments are being made in several branches of the foodstuffs and beverages industries, among them the preservation of fruit and vegetables; these include the renewal of equipment, the introduction of modern techniques and the construction of new factories. The pharmaceutical industry has developed considerably and a plant is now operating which, although it uses imported raw materials, not only supplies the domestic consumer, but competes on the markets of other Latin-American countries. In the textile industry, there is now a preference for the manufacture of rayon piece-goods. Two of the four textile mills installed in Ecuador during the last three years are rayon-weaving plants. In addition to these, there is a further mill under construction, while another, for rayon yarn, is in the blueprint stage.

A first step has been taken in the sectors of basic industry which may be very important for future development, although at present such industry is small. The cement plant located in the coastal region, with a capacity of 100,000 tons, produced 79,000 tons in 1951. This production covered all consumption requirements, although they rose in the last five years at an average rate of 12 per cent annually. This plant will be joined by another, having a capacity of 50,000 tons of cement a year, to be installed in the plateau region. An attempt has already been made to manufacture electrolytic caustic soda, while a plant for sulphuric acid, based on local sulphur production, is under study. Plans are being drawn up for a paper factory, using domestic raw materials—mainly bagasse—and which will supply from 70 to 80 per cent of paper requirements. The Corporación de Fomento set up by the government in January 1949, has played an important part in several of these projects.

(f) *Mexico*

The Mexican manufacturing industry has experienced a new upward trend in recent years. This was mainly due to the currency devaluation of 1949 and the protective tariff measures, thus restricting imports, which have been in force since that date. The considerable volume of public and private investment, and the peak period reached by the agricultural and commercial sectors of the economy, caused demand to act as a continual incentive to industrial production. The exception has been in some consumer goods industries, among them textiles, where sales have been limited by insufficient purchasing power in the interior of the country. This tendency was not offset by the slight recovery in foreign markets for Mexican textiles in 1951. The very unequal distribution of income, apparent in Mexico since the Second World War, has been an adverse factor in the progress of basic consumer goods industries (such as textiles and footwear). It has, on the other hand, constituted an incentive for industries manufacturing durable consumer goods, which have expanded rapidly, particularly in metal and electrical goods for household and commercial use.

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[14] For more complete data, see *The Economic Development of Ecuador* (E/CN.12/295).

Table 162. Mexico: Quantum indices of production for selected industrial groups (1948 = 100)

Groups	*1947*	*1949*	*1950*	*1951*	*1952*	*Percentage of cumulative annual increase 1947-52*	*Percentage increase 1951-52*
Pig-iron	134.2	117.4	129.4	144.7	173.6	5.3	20.0
Ingot steel	99.4	127.7	133.6	156.2	181.6	12.8	16.3
Finished steel	98.5	133.0	138.0	169.7	193.0 [a]	14.4	13.7
Cement	92.5	109.0	128.5	142.1	151.8	10.4	6.8
Sulphuric acid	92.3	105.1	119.9	235.0	288.8 [a]	25.6	22.9
Soap	89.0	113.1	133.7	113.7	106.9	3.7	−6.0
Paper	75.4	107.7	124.2	136.1	125.3	10.7	−7.9
Cardboard and paperboard	86.2	101.0	123.1	128.0	135.5	9.5	5.8
Tyres	86.8	101.6	95.0	120.3	112.0	5.2	−6.9
Textiles	96.1	92.0	97.5	86.2	82.5	−3.0	−4.3
Leather footwear	86.8	93.7	98.1	87.7	90.0	0.7	2.6
Vegetable oils	107.9	123.0	135.8	134.4	127.1	3.3	−5.4
Beer	95.9	120.3	147.1	178.7	170.2	12.1	−4.8
Preserves	91.6	77.3	128.2	171.1	120.2	5.6	−29.8

Sources: Pig-iron—Iron and steel companies; finished steel, ingot steel, and textiles, Banco de México; cement—Nacional de Cemento; sulphuric acid—Cámara Nacional Financiera; paper, cardboard and paperboard—Joint Mission of the Mexican Government and of the International Bank for Reconstruction and Development, and *El Desarrollo Económico de México y su Capacidad para Absorber Capital del Exterior*, México, 1952, table 86; footwear, tyres, vegetable oils, beer and preserves—*Revista de Estadística.*

[a] Estimated.

The combined effect of this income trend, the industrial development policy promoted by the government and tariff protection, has also provided a new and powerful incentive for capital goods industries. Their development, which—as in the case of Brazil—is the most notable feature of Mexico's industrialization, was more intense than that of consumer goods industries, and has thus been an objective of industrial policy. By and large, the growth of capital goods production in 1952 and the crisis of the industries manufacturing consumer goods are very apparent (see table 162). These statements may be illustrated by partial data. Production of ingot steel increased —notwithstanding the low figures for 1948 and 1950—at a cumulative annual rate of 12.8 per cent between 1947 and 1952,[15] while that of finished steel rose at the rate of 14.4 per cent during the same period. Cement output showed a cumulative annual increase of 10.4 per cent. Similarly, production of sulphuric acid rose at a cumulative annual rate of 25.6 per cent; paper, 10.7 per cent; cardboard, 9.5 per cent; and tyres, 8.4 per cent. For almost all these industries, the annual increases between 1949 and 1952 were substantial, sometimes higher than the averages for the preceding years.

By contrast, two important consumer goods industries—textiles and leather footwear—recorded between 1947 and 1952 a decline of 3 per cent cumulative annual average for the former, while the latter hardly increased (see table 35), with particularly sharp declines in 1951 and 1952. Affected by the competition of synthetic detergents, soap production also fell in 1951 and 1952, although it had increased substantially in 1949 and 1950. But vegetable oils, beer, and preserved food maintained a satisfactory rate of growth throughout the 1947-51 period, although they declined in 1952, especially preserved food.

Capital goods industries continued to encounter obstacles, inherent in their uneven growth and the lack of integration, sometimes aggravated by local transport difficulties or the shortage of raw materials. Notwithstanding the extraordinary upward trend in production and the steady rise in total consumption, this has resulted in low coefficients for utilizing installed equipment, particularly in the iron and steel, and cement industries. Official efforts are at present being directed towards solving some of these problems and to achieve a greater integration of industrial processes; it is anticipated that the expansion planned in some sectors will permit the full utilization of the basic productive capacity in other sectors.

The example of the iron and steel industry provides a specific illustration of the type of maladjustment which has arisen. Production in 1952 was 535,000 tons of ingot steel and 456,000 in 1951. Notwithstanding these unprecedented figures, domestic production in 1951 only covered 55 per cent of total iron and steel consumption, compared with 61 per cent in 1950 and 70 per cent in 1949. Nevertheless, between 1947 and 1950 blast furnaces operated at from 50 to 55 per cent of their maximum theoretical capacity, and, in 1951, experienced serious setbacks through lack of raw materials and coke. Steel production in 1951, greatly assisted by scrap and pig-iron imports, constituted only 71 per cent of the country's theoretical capacity. In view of projected transport improvements and the installation of a coking plant (now being completed), designed to produce about 300,000 tons of coke by mid-1954 and over 400,000 tons by the end of that year, it is anticipated that a fuller use will be made of the present blast furnace capacity and that domestic coke requirements will also be filled. This will provide a firm basis for new enlargements, which include a project for installing a new blast furnace having a capacity of 700 to 800 tons a day. Assuming 80 per cent efficiency, Mexico will be producing 518,000 tons of pig-iron by

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[15] But not for pig-iron, due to a sharp decline in 1948. Nevertheless it rose by an average of 5.3 per cent.

Table 163. Mexico: Capacity, production and consumption of cement

(Thousands of tons)

Year	*Total capacity*	*Production*	*Net imports and exports*	*Apparent consumption*	*Percentage of annual increase in consumption*	*Percentage of consumption covered by production*
1947................	1,460	999	72	1,071	3.5	93.3
1948................	1,538	1,080	−30	1,050	2.0	102.8
1949................	1,795	1,177	−4	1,173	11.7	100.2
1950................	1,974	1,388	−18	1,370	16.8	101.3
1951................	1,974	1,535	3	1,538	12.3	99.8
1952................	2,127	1,640	4	1,644	6.9	99.8

Sources: Cámara Nacional del Cemento and Dirección General de Estadística.

1955 or 1956, that is, double the figure for 1951.[16] This will provide a better future supply for the steelmaking and finished steel industries, although no very notable improvement can be expected in the immediate future. Steel capacity during the next few years will rise by 40 per cent over its present 644,000 tons, and there are prospects for increasing production of ingot steel to over 750,000 tons (i.e., 66 per cent above the volume for 1951) if outstanding obstacles can be overcome. This will cover approximately 70 to 75 per cent of the anticipated future consumption.

Rolling mill production has also progressed considerably, particularly since 1949. In 1952, some 500,000 tons were produced as against 441,000 tons in 1951. Nevertheless, in the case of steel sheet, sections, rod, tinplate and other articles, domestic production has risen at a lower rate than consumption, which, altogether, may be estimated to have increased at the rate of 20 per cent annually during the last few years. Several expansion projects are under way for rolling mills, which will come into operation between 1954 and 1956, based on the anticipated higher steel production; there are prospects of covering domestic consumption—except for special products—if high coefficients of utilization are achieved. A plan is also being carried out for a large plant making seamless steel tubes, which will supply, amongst others, the petroleum industry.

By the end of 1951, the cement industry—whose expansion has been the most rapid of all—had developed a capacity of 2.1 million tons, or 8 per cent more than at the end of 1950 and more than 45 per cent higher than the figure for 1947 (see table 163). A large part of the increase was due to enlargements in existing factories, while eight new expanded plants are in course of construction or in the planning stage, plus one new factory, so that total capacity will be 2.8 million tons by 1954, that is, 31 per cent more than in 1952. This rapid growth is the result of the high rate of increase in cement consumption, which rose by 9 per cent between 1947 and 1952 (see table 163). This is, however, another industry in which transport difficulties and inadequate fuel or power supplies have prevented full use being made of capacity, which had shown coefficients of 70 per cent in 1950 and 68 per cent in 1947. Only in 1951 and 1952 did the cement industry succeed in reaching 77 per cent of its potential, and even then it did not adequately meet the demand. As a conclusion, it is not merely a question of improving the efficiency of the industry, but also of continuing to increase its capacity.

Apart from its direct use in public and private building, cement is also a raw material, 20 per cent of the output being used for a series of rapidly developing auxiliary industries. These include the production of tiles, concrete tubes, asbesto-cement materials, lamp posts, transmission pylons, and piles.

During the last three years rapid progress has also been made in the chemical industry, particularly as regards sulphuric acid, where both capacity and output have been doubled (see table 164). Although this has enabled the aggregate domestic demand to be met, the 105,000 tons produced in 1952 still represent only two-thirds of total capacity. A substantial part of sulphuric acid production is used directly for the manufacture of chemical fertilizers. The plant installed in 1951 for an annual production of 60,000 tons of sulphate of ammonia is working at full capacity and substantial enlargements are planned.

Another industrial sector in which outstanding progress has been achieved is the manufacture of paper and cardboard, where 1951 and 1952 output amounted to 180,000 tons and 172,000 respectively, or 27 and 21 per cent above 1949. This increase was made possible by the acceleration of production in the government plant installed in the State of Jalisco in 1946, which, owing to the raw materials readily available, has been the only one capable of producing pulp and manufacturing paper almost at maximum capacity. Efforts are being made to cover, during the next few years, the national deficit of pulp—not less than 50,000 tons a year—by means of three large projects, at present under consideration. These

Table 164. Mexico: Capacity and volume of production of sulphuric acid

(Thousands of tons)

Years	*Capacity*	*Production*
1949........	63	38
1950........	63	43
1951........	136	85
1952........	153	105

Source: Banco de México.

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[16] A sponge-iron plant has also been installed—the first in Latin America—with a present capacity of 12,000 tons, which will be expanded to 60,000 tons, while the installation of low shaft furnaces for the use of non-coking coal is being studied.

are essential to meet the average rate of increase of 9 to 10 per cent in total paper consumption (excluding newsprint). Projects are being studied for the production of chemical pulp from sugar cane, and a first mill is being installed with a capacity of 9,000 tons. No definite decision has yet been taken for the domestic manufacture of newsprint, although the present annual consumption exceeds 50,000 tons, and may easily increase.

Various branches of the Mexican mechanical and electrical industries show advances. Production of motors and equipment for industrial use, domestic electrical appliances, steel furniture, stoves, sanitary fittings, radios, and so on, has increased, supported by tariff protection and by the policy which encourages the domestic assembly of equipment, which was formerly directly imported, leading in time to their manufacture in Mexico. The motor vehicle assembly industry operated at a high level of capacity in 1951 and 1952; here a fundamental change is about to take place with the establishment, during the next few years, of a plant to produce diesel truck and tractor engines. This project will be supported by both government and private funds and will be developed with Italian technical aid. A plant for the production of railway wagons, the first of its kind in Mexico, is also to be established.

In contrast to the expansion which has occurred in the above basic industries, one of the main branches of consumer goods—textiles—has continued to encounter serious difficulties. The loss of the export market, which in 1946 absorbed 34 per cent of the total production of all textiles, has prevented this industry—and in particular cotton textiles—from recovering to its previous peak level. The decline in sales after the war coincided with additional investments which increased the aggregate output capacity, thus creating low efficiency in the industry. It operated at only 47 per cent of capacity in 1951 and declined somewhat further in 1952. The sharpest contraction has been in fabrics for popular use, due to the general lack of purchasing power. The hopes that modernization and reorganization of the textile industry might permit an improvement in its general position where strengthened in 1951, when a worker-management agreement was signed by representatives of 245 textile establishments.

Woollen textiles are faced with even more unfavourable conditions. After a decline in 1948 to a level below that of 1939, production increased by approximately 10 per cent between 1948 and 1952, notwithstanding very high tariff protection and restrictions on imports. In contrast, the manufacture of rayon goods has continued to expand and to displace cotton goods. The rayon industry is now becoming integrated through the production of synthetic fibre, which rose from 6,000 tons in 1949 to some 15,000 in 1952. This increase was possible through the establishment of two large mills in 1947. Present projects for cellulose production will more than cover requirements of acetate rayon fibre and there will be a considerable exportable surplus.

The leather footwear industry has continued to be dependent upon the inability of the domestic market to absorb production, in spite of a virtual elimination of imports. Output of the main factories was lower, in 1951 and 1952, than that achieved in 1946. Nevertheless, there was some increase in the manufacture of other types of footwear.

During 1951 and 1952 some foodstuffs industries continued to expand, particularly, in 1951, preserved fruit, vegetables and fishery products, for which there is a substantial export market. The meat industry, also mainly directed towards exports, made a slight recovery in 1951, principally owing to frozen products. Industries covering production of sugar, beer, edible oils and their by-products—the output of which increased considerably—have been among the few consumer goods which have progressed on the domestic market during the last few years, although beer and edible oils show decreases in 1952 as compared with the previous year.

(g) *Peru*

During the last three years, two unfavourable factors influenced Peruvian manufacturing, which is mainly devoted to the production of consumer goods. These were the anti-inflationary measures adopted by the government after the currency reforms of June 1949, and the strong competition from foreign goods, whose imports rose rapidly.

Due to the high level of imports in recent years, the growth of industrial production has probably been even slower than during the post-war period, when it grew at a cumulative annual rate of 4.5 per cent until 1949. After the war, output increased, particularly in the textile groups, in the manufacture of tyres and other rubber products, in sheet glass and ceramics, and chemical products, among them sulphuric acid and caustic soda.

There continued to be some industrial depression during 1952, particularly in textiles. The difficult situation of this and other industries led to tariff increases in February 1952, mainly on textile products, sheet glass, crockery, foodstuffs, paper and cardboard, and soap. It was anticipated that these measures, together with a resumption of credit facilities, would lead to firmer market prospects.

Peru's industrial development still encounters serious difficulties imposed by the scope and nature of the domestic market and the absence of a definite industrialization policy. On the other hand, the country has raw material and power resources in addition to possibilities for obtaining capital. Lately, the industrial basis has been broadened with the introduction of jute textiles, paper and cardboard made from bagasse, plywood and some metal and chemical products, although in general the rate of growth is slow and is, as yet, of little importance.

Although the basic industries have not been substantially modified during the last three years, Peru is now about to undergo a major change in this respect. An iron and steel plant is in the blueprint stage, which will produce 53,000 tons a year of finished steel and cover the major part of consumption requirements, although an increase in demand will entail a continuance of imports. The cement industry, which had already grown considerably in previous years, although unable to meet the entire demand (see table 165), is once more in the course of expansion. It is anticipated that in 1953-54 output will be increased by 60 per cent through the installation of two new cement plants with a joint capacity of 210,000 tons, thus obviating the imports required in 1951 and 1952. In some sectors there has been a trend towards investment, both of domestic and foreign capital. With a view to the export market, consideration is being given to expansion of rayon output and the installation of an acetate plant using imported raw materials. A project has been announced for a mill at Iquitos to produce

Table 165. Peru: Production and consumption of cement

(Thousands of tons)

Years	Production	Net imports and exports	Consumption		
			Total	Percentage of annual increase	Percentage covered by production
1947	255.7	35.0	290.7	0.7	87.8
1948	282.4	6.9	289.3	−0.5	97.7
1949	289.0	−2.9	286.1	−1.1	101.0
1950	331.3	1.4	332.7	16.3	99.5
1951	367.4	11.2	378.6	13.8	97.0
1952	370.2	53.7	423.9	19.5	87.3

Source: Bulletin of the Instituto de Fomento Minero and *Anuarios de Comercio Exterio* (foreign trade yearbooks).

mechanical pulp for newsprint, using the cetico tree. Enlargements are also planned for tyre and glass factories.

(h) *Uruguay*

In recent years, a reduction has occurred in the rate of industrial growth. Nevertheless, Uruguay has already achieved substantial progress in light industry, supplying either entirely, or to a large extent, the domestic consumption of foodstuffs, beverages, tobacco, textiles, rubber products, construction materials, iron and steel products, fertilizers, insecticides, and pharmaceutical products. In 1951 and 1952, the productive capacity of many of the new industries established during the war, as well as that of a number of enterprises whose output was enlarged, exceeded the possibilities for absorption by the domestic market. During 1952 there was thus an accumulation of stocks which the government at times had to purchase in order to maintain full-time production. As with the majority of the Latin-American countries during the period, a crisis also arose in the textile industry. The industry for wool tops, after a high export level during 1950 and 1951, assisted by a preferential exchange rate, had to suspend exports to the United States in 1952, due to efforts on the part of North American industrialists to protect their domestic industry, which was also passing through a crisis.

Cement plants have been working at full capacity since 1950, but, because enlargements were not carried out in time, it has been necessary to import increasing quantities of cement. Although, formerly, a certain amount of cement was exported, in 1951 imports accounted for 7.8 per cent of the domestic consumption, a figure which rose to 29 per cent during the first seven months of 1952. To meet this situation, work has begun on a plant having an initial capacity of 100,000 tons a year and an anticipated output of double that figure at a later date. The annual rate of increase in cement consumption was over 6 per cent in both 1947 and 1951, and showed an even higher percentage in 1952 (see table 166.)

(i) *Venezuela*

Venezuela's industrial economy has in recent years shown a firm upward trend, which had not previously been clearly visible. In addition to further increases in the production of cement, rayon textiles and food products (see table 167) new industries have appeared and progress has been made towards basic projects, such as the manufacture of chlorine, which emphasize the changes which are appearing in the industrial structure. The protectionist policy against foreign competition and the availability of long-term credits, as well as foreign capital investment, have been additional factors of assistance to recent industrial progress. In addition, Venezuela has not experienced such an acute shortage of electric power in recent years as most of the Latin-American countries in the process of industrialization. In contrast, Venezuela's industry has continued to encounter an obstacle which has always placed domestic industry in an insecure position in regard to import competition; this is the high cost of labour in terms of dollars. This factor, and the lack of technical progress, have been an influence upon the relatively stationary situation of the paper and cotton textile industries, for example, from the post-war period until the present time.

Table 166. Uruguay: Production and consumption of cement

(Thousands of tons)

Years	Production	Net imports and exports	Consumption		
			Total	Percentage of annual increase	Percentage covered by production
1947	280.0	−4.2	275.8	6.6	101.7
1948	290.0	−0.2	289.8	5.1	100.0
1949	295.0	–	295.0	1.8	100.0
1950	305.0	6.0	311.0	5.4	98.0
1951	305.0	25.8	330.8	6.4	92.2
1952	304.0 [a]	72.4 [b]	..	..	..

Source: Administración Nacional de Combustibles, Alcohol y Portland.

[a] Estimated on the basis of seven months' production.

[b] Only the first seven months.

Table 167. Venezuela: Indices of the quantum of production of selected industrial activities

	1947	*1949*	*1950*	*1951*	*1952*	*Percentage cumulative annual increase*	*Percentage increase 1951-52*
Selected rice	132.0	85.2	164.9	310.8	559.1	33.5	79.9
Sugar	107.3	154.5	189.7	170.5	244.5	17.9	43.4
Edible oils	84.4	107.2	112.8	179.1	237.2	22.9	32.4
Fish preserves	80.6	70.6	48.9	79.6	80.8	0.04	1.5
Biscuits	67.9	82.1	71.5	59.8	73.5	1.6	22.9
Chocolate	101.1	111.9	114.9	118.6	113.7	2.4	−4.1
Beer	87.0	118.2	142.1	186.0	222.6	20.7	19.7
Mineral water	53.6	134.1	140.5	158.4	173.6	26.5	9.6
Cigarettes	115.9	101.7	105.1	110.4	134.2	29.8	21.6
Cotton woven goods	105.0	69.9	43.5	52.8	64.7	−6.7	22.5
Artificial silk woven goods	42.4	174.2	337.9	524.6	549.7	66.9	4.8
Woollen woven goods	122.2	107.8	111.8	239.0	226.8	13.2	−5.1
Tyres and tubes	99.6	70.1	257.7	325.6	397.9	31.9	22.2
Cement	68.0	139.7	233.6	289.7	391.8	41.9	35.2
Soaps	95.1	92.7	76.2	74.3	70.7	−4.7	−4.8

Sources: Boletín de Estadística (February 1953); *Cuaderno de Información Económica* (1950, Nos. 6 and 8).

During 1952, output from the cement industry amounted to about 840,000 tons, representing a rise of 35 per cent on the figure for the previous year and 180 per cent on that for 1949 (see table 168). Nevertheless, until the new projects, which are expected to provide an aggregate production capacity of a million tons by the end of 1953, materialize, it will be necessary to continue cement imports.

The continued development of transport has provided a new incentive for the manufacture of tyres and tubes. In 1952, production was 154,000 and 129,000 units respectively. In 1952, the construction of two new factories was commenced, which will bring total domestic production to over 250,000 units in 1953, thereby covering consumption needs. Parallel to the greater production of tyres, new assembly plants for passenger and load-carrying motor vehicles will begin to operate in 1952.

The manufacture of synthetic detergents, which began in 1952 as a result of a foreign investment of 4 million dollars, constituted an important new industry, particularly since it makes use of petroleum derivatives. The replacement of a traditional manufacture such as soap, by a new type of product is similar to the situation occurring in the textile industry, where further spectacular increases in the production of rayon piece-goods took place during 1951-52. Between 1949 and 1952 output almost quadrupled and in the latter year amounted to 21 million metres; production also rose for mixed cotton and rayon textiles. That same year, a new undertaking, financed by North American and Venezuelan capital, opened the first plant in the country for acetate rayon thread; it has a capacity of almost 3,000 tons a year, and will operate with imported raw materials. The introduction of the new plant gives the rayon industry a firmer basis for integration. In addition, a new plant for rayon yarns is planned. These developments have had an extremely adverse effect upon production of cotton textiles, in spite of modernization and tariff protection. Except for knitted textiles, no branch of cotton textile production has experienced anything more than a moderate increase during 1951-52, which still do not balance the sharp declines of the post-war period.

Some other consumer industries have, in contrast, shown a sustained growth. Production of cigarettes and beer reached unprecedented levels in 1951 and 1952. Similarly a match factory began operating and has made Venezuela self-sufficient in this field. The output of oleomargarine and pasteurized milk has increased, while production of fish preserves——which had fallen considerably after the high level reached in 1948—partly recovered

Table 168. Venezuela: Production and consumption of cement

(Thousands of tons)

Years	*Production*	*Imports*	*Consumption*		
			Total	*Percentage of annual increase*	*Percentage covered by production*
1947	146	385	531	–	27.5
1948	215	466	681	28.2	31.6
1949	300	601	901	32.3	33.3
1950	501	336	837	−7.1	59.8
1951	621	250	871	4.1	71.3
1952	840	121	961	10.2	87.5

Source: Boletín de Estadística del Ministerio de Fomento.

in 1951 and 1952. A new enlargement of the fish preserve industry may be anticipated, together with that of preserved vegetables and fruit. In addition, such industries have stimulated interest in the possible manufacture of tinplate containers.

Venezuela's sugar deficit—apart from production of raw sugar—has been met by imports equalling or exceeding domestic production. Imports were not reduced in 1951-52. As in previous years, the difficulty has originated partly in the low cane yields and the absence of well-located sugar mills. For the future, it is planned to increase the 1951 output of 45,000 tons, and the 65,000 tons of the 1952 harvest, by the production of an additional 30,000 tons in 1953-54, while there are plans to raise aggregate production to 115,000 tons in 1956. Notwithstanding the deficiency of sugar production, there was a serious excess in the output of alcohol during the later months of 1952. This emphasizes another aspect of the difficulties through which this industry, as a whole, is passing.

An example of progress in other industrial spheres in Venezuela is the considerable expansion in the production of concentrated cattle and poultry foods. During 1952, an annual production rate of some 27,000 tons was achieved, which exceeds the 1951 figure by 50 per cent, and is three times greater than that of 1949. This industry is largely based on domestic raw materials.

Even outside the petroleum sector, Venezuela continues to offer a favourable field for foreign industrial investment, always providing that the labour force is small. This statement is reflected in the industrial expansion of various rubber, rayon and pharmaceutical products, in all of which recent investments have been made. Labour costs are offset in other cases by the strong purchasing power of the Venezuelan market, which allows industrial operations to be carried out on a relatively larger scale than in other Latin-American countries with similar populations. The source of foreign investment has not been limited to the United States, European capital having also shown some interest. In spite of the firmer industrial foundation in Venezuela, it remains to be seen whether an eventual reduction in the peak petroleum level—which in turn determines a large part of the investment in public works—would not adversely influence these trends and the rates of annual production, or whether the domestic market will be sufficient to provide a reasonable basis for a minimum industrial output, which will stimulate new and progressive investments of both foreign and domestic capital.

(j) *Central America, Cuba and other countries*

Manufacturing is not developed to any great extent in the remaining Latin-American countries. During the last few years there has been a growing momentum and a number of relatively important industrial enterprises are being planned or are in the course of establishment. The domestic markets of Bolivia, the Caribbean and Central American republics, Panama and Paraguay are, broadly speaking, too restricted to permit any substantial industrial development. On the other hand, where the market is widely developed as in Cuba, there has either been no definite industrialization policy or the degree of tariff protection has been insufficient.

Excluding cement manufacture, no large-scale capital goods industries have been established in any of the remaining countries. The majority of new industrial investments were devoted to the production of consumer goods. In Central America and Cuba, the textile industry has expanded in recent years, and new projects are at present being developed. The rayon factory, using imported cellulose, which has operated in Cuba since 1948, is particularly important, and has a large export market; not only has it worked at high levels of capacity, but it is being enlarged. Nevertheless, with a single exception, textile production has remained more or less stationary or has even declined. This is particularly true of Central America, where apart from the limited size of the markets and the absence of protection, the efficiency of the factories has been low. As in other areas, rayon has competed strongly with cotton goods.

The industries for foodstuffs, oils, and fats have encountered more favourable conditions, their development leading to a partial substitution of imports by domestic production. In 1952 the first flour mill was established in Cuba, with a capacity of almost 80,000 tons. Production of preserved fruit, vegetables and fish products increased in several countries, and the preparation of frozen meat for the export market has been established on a small scale. With the rise of cotton output in El Salvador, Guatemala and Nicaragua, Central America's production capacity for vegetable oils rose in the last three years. In addition, the development of new raw materials for oils was begun.

Other items of industrial progress worthy of mention include the establishment of plywood production in Guatemala and the Republic of Panama, and the small-scale manufacture of paper, using local fibres, in Guatemala and Costa Rica. In Costa Rica, up-to-date production of ceramics has also commenced, while there has been progress in the industrial metals group, including the manufacture of kitchen apparatus and office furniture. The assembly of metal furniture is being started in El Salvador, while the manufacture of some farm implements has commenced in Nicaragua. A factory for chemical fertilizers is planned in the Dominican Republic, as well as a plant for producing 8,500 tons of paper using bagasse from sugar-cane.

Cement manufacture has acquired particular momentum during recent years in several countries, including Cuba, Guatemala and Nicaragua, and large expansions are planned. A modern plant entered production in El Salvador at the end of 1952, and the initial capacity of 50,000 tons is to be enlarged later. Together with other projected expansions, aggregate cement production capacity in Central America should meet a large proportion of the estimated 200,000-ton demand in 1953. These developments should eliminate part of the 100,000 tons imported. Cuba also plans to enlarge its cement industry by some 130,000 tons within the near future, to reach a capacity of close to 500,000 tons. Production of asbesto-cement materials is being developed in El Salvador, and in several countries, including the Republic of Panama, production of tiles and other building materials has advanced considerably.

Recognition of the adverse conditions which affect industries in Central America, due to the limited size of domestic markets, has caused the governments of those countries to undertake a study of the possibilities for developing new activities, based on an integration of the regional market. Under the joint auspices of the United Nations and of the respective governments, a meeting of the Ministers of Economy[17] was held in Tegucigalpa in August 1952, at which agreement was reached on the basic principles involved in reciprocity. Various existing and projected industrial activities were singled out, to which these principles could be applied once their feasibility had been investigated. Such industries included the cotton textile industry and the co-ordinated development of the manufacture of oils and fats, the preparation and packing of meat, the manufacture of tyres, and the utilization of forest resources for paper production.

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[17] Economic Commission for Latin America, Committee of Ministers of Economy on Economic Co-operation in Central America, report of the first session (E/CN.12/296/annex C).

Chapter III

MINING[1]

1. INTRODUCTION

The production of copper, lead and zinc in Latin America is mainly for export. While it is true that in recent years domestic consumption has been increasing as a result of the development of metallurgical industries, it still represents only a small proportion of production. At the same time, with few exceptions, the chief consumers are not producers, which means that there are large exports on one hand, and small imports on the other. Except in the case of Chilean copper, this situation has not given rise to any considerable interregional trade, since the mines are mainly owned by large foreign companies, whose sales are centralized in the principal world markets. In the case of certain metals there is also the fact that they are produced and exported from Latin America in the form of concentrates or unrefined ingots which must be finally refined in overseas industrial centres.

The three metals mentioned above have been subject to considerable demand and high prices since July 1950. This situation continued in the case of copper until the end of 1952, while the consumption and prices of lead and zinc have been weakening since May 1952.[2] For more than two years, therefore, with high prices, and a demand greater than output, there was considerable incentive for increased production; there were also various local reasons. For instance the new Código de Minería (Mining Code) of 31 December 1950, in Peru, reduced taxes on the production and export of mining products, which, together with legislation ensuring that there would be no increases during the next twenty-five years, has been a powerful stimulant to new investments.

Mining in other Latin-American countries has also received specific local encouragement, resulting in a better advantage being taken of the high prices ruling in world markets. There are exceptions, such as Chilean copper, which did not obtain the full benefit of the price increases, since the government received the difference between the market price and the official price of 24.5 U.S. cents per pound, fixed for copper produced domestically in the United States.

In addition to the above factors, in some Latin-American countries there are various obstacles impeding the development and expansion of the mining industry. Transport deficiencies are notable, whether these be due to the lack of roads or railways, lack of equipment, or freight congestion. The shortage of electric power is a further hindrance in many countries.

Opening up a new mine, or increasing the capacity of existing installations, both require considerable investments, preparatory work often lasting several years. For this reason, broadly speaking, a temporary rise in price does not cause any increase in productive capacity, which must be based on reasonable long-term business prospects. It is therefore probable that the local factors, mentioned above, have considerably affected the decisions made by the mining companies. This is particularly the case when these factors have been interpreted as an indication of the Latin-American governments' attitude towards the development of the mining industry—a policy which seems to have no common viewpoint. At the same time, the production of these metals in Latin America is supplementary to that of the United States, which gives rise to a feeling of insecurity for the more distant future. When there are shortages and a firm market in the United States, Latin America supplements production in that country, which has not yet had time to respond to the stimulus of rising demand and prices. With any change in the cyclical tendency, however, United States production exceeds demand, and Latin-American producers, who are unable to finance stock-piling, are obliged to reduce their activities.[3]

Regardless of the influence on the long-term problem, it is obvious that the high prices have served as an immediate incentive to the maximum utilization of production facilities available in 1951/52. During the last five years, copper production has fluctuated around the 500,000-ton mark, tending to increase since 1949-50, at which time there had been some declines. Lead has shown a steady rise, reaching some 400,000 tons in 1952, as compared with nearly 300,000 in 1948. Zinc production has increased even more rapidly, to more than 380,000 tons in 1952 (see table 169).

The decline which began in over-all copper production in 1949, as compared with the figures for 1948, is due to

Table 169. Latin America: Production of copper, lead and zinc

(Metric tons of fine metal) [a]

Year	*Copper*	*Lead*	*Zinc*
1948	545,468	294,006	271,184
1949	479,476	335,116	292,444
1950	480,074	358,490	343,595
1951	504,043	366,407	327,830
1952	512,498	378,950	382,499

Source: Yearbook of the American Bureau of Metal Statistics.

[a] Refined, in bars, impure, ore and concentrates.

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[1] This review of mining is limited to copper, lead and zinc, the three metals common to the majority of Latin-American countries.

[2] See part II, chapter I, of this study, especially plate 32.

[3] See "Recent Trends and Events in Mining in Latin America". *Economic Survey of Latin America, 1950* (E/CN.12/217/Add.12).

changes in the reserves situation of two of the large Chilean mining companies. The complete exhaustion of the oxides at one of these mines made it necessary to abandon the corresponding section completely, which had a capacity of 25,000 tons annually. In the other case, sulphides appeared, mixed with the oxides which were being mined. This caused a reduction in the production rate of the oxides, the only type for which processing equipment was available. Consequently, Chile is constructing or enlarging sulphide plants, and ultimately production will probably return to 1948 levels. Disregarding these two special cases, the general copper-mining trend has been towards slight increases. In Peru there are plans for considerable increases which should produce a greater output in the course of the next few years.

In reviewing the zinc position, it must be recalled that this metal is generally found in mixed deposits, together with lead and small quantities of silver and copper. The relationship of the general prices and the percentages of metals is such that zinc is fairly often regarded as a by-product which is only made use of when the price warrants, while production of the other metals pays for the working of the mine. Furthermore, the cost of refining zinc is very high, because of the high proportion of losses. The zinc is normally set aside in the tailings from which the other metals have already been separated, and is only extracted if it will show a profit; otherwise it is left in the tailings, giving a production flexibility not common to other metals. Variations in the output of zinc therefore depend upon a combination of price stimulus and the excess capacity of the refinery. These circumstances greatly affect the difference which exists between the expansion of lead mining and that of zinc; the former has increased by 35 per cent between 1948 and 1952, as against 43 per cent for the latter.

2. ARGENTINA

(a) *Lead and zinc*

The production of lead and zinc, especially the latter, has increased in recent years, although the absolute total is not very substantial (see table 170). The production capacity of Argentina is greater than the demand, and both metals have occasionally been exported in various forms. The geographical situation of the country also obliges the export of a certain amount of ores or concentrates mined in the areas close to the frontiers of Bolivia and Chile. The great distances, combined with the means of sea, river and overland transport, lead Argentina to refine and consume metals from neighbouring countries, while conversely exporting part of its own production.

Table 170. Argentina: Production of lead and zinc in ore and concentrates

(Metric tons)

Years	*Lead*	*Zinc*
1948	21,773	11,289
1949	18,036	10,915
1950	23,042	12,700
1951	24,040	15,478
1952	23,100	15,200

Source: Ministerio de Industria y Comercio and *Yearbook of the American Bureau of Metal Statistics.*

One mine in Jujuy produces almost 90 per cent of the total lead and zinc output, reaching, in 1951 and 1952, the highest tonnages of the last ten years. The main limitations obviating an improvement on previous results have been the lack of adequate additional transport facilities and the difficulty in obtaining spares or in replacing some equipment which has been required since 1950.

The sulphuric acid plant which has been installed in the port of Borghi, Buenos Aires province, and an annual output of 40,000 tons, makes use of sulphur obtained from the sulphates as a by-product of zinc refining. This plant came into operation in May 1950, but the restrictive effect of the mining output has prevented it from reaching maximum production capacity.

The thermo-electric zinc refinery at Comodoro Rivadavia entered production in April 1951. This is probably the only installation in the world using metallurgical coke made entirely from petroleum residue, which has made the production of metallic zinc independent of fuel imports which would otherwise have been inevitable. The supply of raw materials for this plant has been supplemented by imports of zinc concentrates from Chile.

The Argentine five-year plan for 1953-57 anticipates an annual production of some 52,000 tons of lead ingot and some 40,000 tons of refined zinc.

(b) *Copper*

So far, Argentina has produced no amounts of copper worthy of mention. However, the second five-year plan includes the investment of 6 million pesos for copper prospecting.

3. BOLIVIA

In 1952, the Bolivian Government nationalized the large mines of the country. The measures adopted chiefly affected tin and tungsten production, which are not covered by the present study.[4] Nevertheless, the companies which owned the large Bolivian mines also produced lead and zinc, and therefore the prospects for both these metals have been affected by nationalization.

In May 1952, a Commission for Nationalization of Mines was formed, whose main task was to prepare a national expropriation plan. In July, the Banco Minero de Bolivia was given a monopoly, without exception, on all exports of metals and ores. This bank has been operating since 1939 in the international market, but only with a fraction of the country's production. In October, the Bolivian Mining Corporation was formed to handle exports, together with other functions. It would appear that in the final organization it is proposed to divide the sales of metals and ores between these two organizations, with the Banco Minero handling the small and medium-sized mines, and the Corporation the output of the larger mines. At the end of October, the companies (Patiño, Aramayo and Hochschild) constituting the larger group were nationalized, and the working of the deposits was placed under the control of the Mining Corporation.

(a) *Copper*

Almost the entire copper production of Bolivia comes from the Corocoro Mines which has been owned by a United States company since 1934. Production reached a maximum of 6,600 tons in 1948, and has been falling steadily ever since that year. The decline is due to labour troubles, to lower average grade of ore and to lack of reserves with which to maintain the necessary level of

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[4] This review of mining is limited to copper, lead and zinc, the three metals common to the majority of Latin-American countries.

Table 171. Bolivia: Production of lead and zinc

(Metric tons of fine metal)

Years	*Lead*	*Zinc*
1947	11,310	14,603
1948	25,606	21,119
1949	26,311	17,683
1950	31,176	19,630
1951	30,125	30,630
1952	29,326	35,689

Source: Memorias del Banco Minero de Bolivia and *Yearbook of Bureau of Metal Statistics.*

production. In 1951, only 4,846 tons were mined, and output continued to fall in 1952. In July of that year the company advised the Bolivian Government that they were producing at a loss, and that they proposed to close down in 90 days' time. In October, after the company had dismissed and paid off all their personnel, the government rented the mine, complete with all installations and equipment, in order to avoid sudden unemployment and to intensify the search for new reserves. Copper production in all stood at 4,712 tons for 1952.

(b) *Lead and zinc*

The output of these two metals has increased considerably in Bolivia. In 1951 the production was 30,000 tons of each, as against the 1947 totals of 11,000 tons of lead and 15,000 of zinc. In 1952 zinc output is estimated at around 40,000 tons (see table 171).

The Huanchaca Company, which was amongst those expropriated in 1952, produced 11 per cent of the total output of lead in 1951 and 53 per cent of the zinc. A large part of the lead came from mines controlled by the Banco Minero de Bolivia.

The richest and most economical source for Bolivian zinc production is undoubtedly the enormous Matilde mine, near Lake Titicaca, which is one of the largest deposits of this metal in the world. For some years the government had been negotiating with the owners on the method of putting it into operation; the mine was finally nationalized in October 1952.

4. BRAZIL

(a) *Copper*

The high prices on the world markets, the supply difficulties, and the shortage of foreign exchange have combined to raise considerable interest in Brazil in the search for deposits of basic metals, especially copper. The country is a copper producer, although on a small scale, due to the discovery of certain insignificant ore deposits, and an electrolytic refinery which is being built in Utinga, State of São Paulo, with an annual capacity of 5,000 tons. In the Camacua mine (Rio Grande do Sul) some 500,000 tons of ore have been proven to date, and installations are being constructed for the extraction of 3,000 tons per year of concentrates, which will be used in the Utinga refinery. At the same time, reserves of relatively low-grade ore have been found at Itapeva, State of São Paulo, estimated at 200,000 tons, which will be used to supplement the concentrates from Camacua. Finally, a fairly important deposit—some 40 million tons—of low-grade ore around one per cent, has been discovered in Caraiva, State of Bahía, which could, using normal procedure, almost entirely meet the copper requirements of the country, although at relatively high prices.

(b) *Lead and zinc*

The annual production of metallic lead is at present about 6,000 tons. The greater part comes from São Paulo, from the smelting and refining of Bolivian concentrates, to which are added the Brazilian ores from São Paulo and Minas Geraes. Production should be considerably increased as a result of the discovery and working of important galena deposits in the State of São Paulo; no data is available regarding the grade or reserves of these deposits, nor of projects for working them.

5. CHILE

Chilean law provides for different fiscal treatment of large mines, and the medium and small mines. The first group consists of three United States-financed concerns producing copper on a large scale, while the second contains the lead and zinc mines, and such part of the copper as is produced in the smaller mines with Chilean or mixed capital.

(a) *Large copper mines*

It was announced by the Government of Chile on 7 May 1951 that an agreement had been reached with the United States, which apart from points relating to the prices and distribution of copper from the large Chilean mines, contained the following commitments on the part of the two countries concerning development of production: (*a*) the United States companies agreed to make the additional investments required to raise production from the present 350,000 tons per year to 500,000; and (*b*) the Chilean Government agreed to revise the system of taxation.

The taxes levied upon the large mines were mainly these: (*a*) customs duties on imported material and equipment; (*b*) a 50 per cent tax on profits; (*c*) an indirect tax imposed by the sale of foreign currency at 19.37 pesos per dollar in order to obtain Chilean currency to meet local payments. This exchange rate had been maintained since 1934, when salaries and other costs were much lower, and with the passage of time and the continued inflation, the discrepancy between this exchange rate and the prices on the domestic market had become a heavy burden.

On this last point it was agreed that the companies should be obliged to change at the rate of 19.37 only a sum equal to that negotiated in 1951. Any additional amount, whether resulting from greater production or from increased unit costs, would be exchanged at the prevailing bank rate (in May 1951 the bank rate of exchange was approximately 100 pesos to the dollar). In this way the companies are able to cover the major part of cost increases caused by the inflation, and also profit by any reduction in the cost of productive increments over the 1951 figures.

The combined production of the large mines has shown a slight rise over the last few years, although the 374,000 tons in 1952 are still 12 per cent less than the 1948 output (see table 172), but, as a result of works now in process, it is anticipated that there will be a new increase in 1953/54. In general, while improving production over the 1950/51 levels, the three companies have also achieved a noticeable increase in productivity.

Table 172. Chile: Production of the large mining companies

(Metric tons of refined copper)

Year	*Chuquicamata (Chile Exploration Co.)*	*Potrerillos (Andes Copper Mining Co.)*	*El Teniente (Braden Copper Co.)*	*Total*
1948	207,929	67,930	149,005	424,864
1949	175,833	49,163	126,516	351,512
1950 [a]	156,270	45,935	143,254	345,459
1951 [a]	163,446	41,305	155,346	360,097
1952	159,166	47,015	167,657	373,838
1953/54 [b]	220,000	50,000	169,700	439,700

Source: Dirección General de Estadística.

[a] Tonnages expressed in fine copper.

[b] Anticipated production.

(i) *Chuquicamata.* The decline in output from this mine is partly due to problems relating to the availability of the ore and partly to labour troubles which have resulted in partial or complete stoppages of work. It may be estimated that this latter cause was responsible for a loss of output of some 40,000 tons in 1952.

This is an open-cast mine, and the surface oxides, which were lixiviated and transformed directly into electrolytic copper, are nearing exhaustion. For some years intrusions of sulphides have been appearing, which cannot be treated in the same way; the flotation process must be used, following by smelting. The decline in output, since 1949, is due to the necessity for extracting sulphides in order to reach large deposits of oxides. While a sulphide plant was under construction, they were left on one side, since their extraction had of necessity diverted part of the equipment without increasing saleable output.

The sulphide plant under construction will consist of three units, each capable of treating some 60,000 tons of copper per year. The first unit is completed, and came into operation in November 1952. From that date, the mine became much more flexible, since both sulphides and oxides could be processed by their respective plants, and processing could also be begun of the sulphides which had been mined and put aside previously. It has also been possible to use sulphides from the tailings of the lixiviation plant, which had been retained since their sulphides content was sufficient to justify a second treatment.

It is not expected that the output in 1953 will reach the total capacity of the two sections, since the combination described above throws a heavy load on the mills. The company is expanding both the mills and the crushers in order to increase capacity by 1954. Once this problem is solved, and while the workings have sufficient reserves of both types of ore, output may reach very high levels, especially since, in the transition area in which they are at present working, the combined average grade is higher than that in those parts of the deposit containing only one type of ore.

Later, as the oxides became exhausted, it will be necessary to complete the construction programme for the treatment of sulphides. At present, it may be expected that, given normal conditions, production capacity should reach 230,000 tons in 1954.

(ii) *Potrerillos.* In this mine, as at Chuquicamata, the decline in production compared to 1948 is due to problems relating to ore reserves; and labour troubles in recent years have brought production below that which might have been achieved. In 1952 it is estimated that a loss of 4,000 tons may be attributed to labour troubles. As regards reserves, in July 1949 the oxides plant, which had been producing 25,000 tons a year, was closed completely, and the capacity of the mine at the moment is down to some 40,000 or 45,000 tons. The company has succeeded in increasing, by various methods, the amount of metal obtained from the ore. One of such systems is finer milling, and the capacity of the mills and crushers has been increased with this object.

The low grade of ore makes Potrerillos a marginal mine. Nevertheless, although reserves are few, it is estimated that if present costs and selling prices are maintained, the mine can be worked for a further five years on the present proven reserves. The company is making a careful geological survey of the area, but so far it is not known if new reserves have been discovered of sufficient importance to allow profitable exploitation.

(iii) *El Teniente.* This mine has succeeded in raising production to the highest in its history. The increase has been made possible mainly by the construction of an 11-kilometre pipeline which permits the re-use of the water of one of the hydro-electric plants, thereby increasing generating capacity. The improvement is particularly important during low-water periods, which used to reduce production for lack of power. The resultant increase in extraction may be estimated at some 7,000 tons in 1952, to which must be added some 3,000 to 4,000 tons annually obtained from a higher extraction from the ore, while the balance of the increase is due to minor changes in operations. No plans are known for future expansion and it may be expected that the 1954 production capacity will be practically the same as that of 1953.

(b) *Small and medium copper mines*

The small and medium Chilean copper mines profited from the high prices commanded by the metal during 1950-52. A subsantial part of the copper was sold at 55 U.S. cents per pound, and sales still continued at 35.5 U.S. cents at the end of 1952.

A considerable increase in production resulted from the combination of the high prices and the opening of the Paipote copper smelter, which was built by the Caja de Crédito Minero (Mining Bank) at a cost of about 7 million dollars of government funds, and which has a nominal charge capacity of 450 tons per day.

The policy of the Chilean Government, after the agreement of 7 May 1951 with the United States Government, allowed the export of the metal content of concentrates at the same high prices obtained for bars of blister copper from Paipote. It was therefore advantageous to reduce the quantity of high-grade concentrates fed to the smelter, and replace them to the maximum with low-grade ore and concentrates containing some 8 per cent copper. These mixtures were in turn produced by concentrating very low-grade ore, of one or 2 per cent metal content, taken from tailings and dumps of old mines, some of them abandoned for over a century. The outlay in concentrating and in the transport of this ore to the processing plant was able to show a profit because of the high prices paid by Paipote.

The same situation made the lixiviation of tailings of ore oxides of about 3 per cent grade possible, mainly in the province of Antofagasta. During the last two years no less than seventeen small plants have been built in that province for this purpose; together they are producing some fifty tons per month of copper precipitates of 65 per cent grade, which is all exported.

A further problem which has been solved by the high prices is the replacement of equipment worn out by the heavy work of the war years. Practically all the companies have re-equipped their mines and plants, usually with a resultant increase in productivity. The high prices have also justified the conversion to copper of a number of gold-concentrating plants and a lead and zinc selective flotation plant.

In this way the small copper mines have reached a production estimated at 30,900 tons of fine copper in 1952, as against tonnages of 20,094 in 1951 and 17,970 in 1950. Of the 1952 total, 8,993 tons were blister copper from Paipote (see table 173). The tonnage produced in 1952 was the highest achieved by the medium and small mines since 1944, and was almost 50 per cent higher than the average of recent years.

Table 173. Chile: Production of the medium and small copper mines

(Tons of fine copper)

Years	*Ores and concentrates*	*Bars of blister copper (Paipote)*	*Total*
1948	19,945	–	19,945
1949 [a]	20,319	–	20,319
1950 [a]	17,970	–	17,970
1951 [a]	20,094	–	20,094
1952 [a]	21,908	8,993	30,901

Sources: Dirección General de Estadística and Caja de Crédito Minero (Mining Bank).

[a] Balance between total exports and exports of bars.

In the agreement with the United States of 7 May 1951, it was laid down that a part of the larger income received by Chile, as a result of the copper price adjustment, should be devoted to the construction of an electrolytic refinery. It is proposed to carry out this project in Huachipato, with a capacity of from 20,000 to 25,000 tons a year, and it is estimated that the cost will be 4 million dollars, without taking working capital into account.

With technical assistance from the United States, the Chilean Government is carrying out a geological survey in some of the ore-bearing provinces. Although no important discoveries have been announced so far, there are two deposits close to Santiago—"Lo Aguirre" and "La Africana"—which have been completely proven, having reserves of 9 and 2.5 million tons respectively. The latter deposit shows 3.5 per cent grade, and several companies have attempted to organize the working of it, so far without success. "La Africana" could produce 6,000 tons of fine copper per year for more than twenty years.

(c) *Lead and zinc*

The known deposits of lead and zinc in the vast mineral area of the north and centre of Chile are too small to work on any large scale. During the period of high prices they were worked to the maximum with the means available, and the output was processed in various flotation plants owned by the Caja de Crédito Minero and also in a plant handling 150 tons of ore per day, which was built by a Chilean company in Bellavista, Aconcagua. After the prices of lead and zinc fell in May 1952, the plants preferred to devote themselves to the flotation of copper ore, the price of which remained high.

About the middle of 1952, a company in the extreme south put a selective flotation plant into operation which is producing some 250 tons per month of 70 per cent lead concentrates and slightly smaller quantities of zinc concentrates. The whole of this production is exported to Argentina, together with small quantities of hand-picked high-grade lead ore. As the workings in the deposit go deeper, the grade of lead is becoming lower, and that of the zinc higher. The activities of this company have attracted groups of prospectors, who have discovered other mines with similar characteristics, although the reserves involved are not known.

The government is building a road from this region towards the coast, and once this is completed, it is probable that an electrolytic zinc refinery will be constructed—possibly in Aysén or Huachipato. Use could then be made also of the few tons of zinc concentrates which the country has regularly produced.

Table 174. Chile: Production of lead and zinc

(Tons of fine metal)

Years	*Lead*	*Zinc*
1948	5,122	715
1949	2,859	60
1950	2,570	64
1951	9,207	1,268
1952	10,344	2,873

Source: Dirección General de Estadística and direct information from the mining companies.

Due to the contribution made by the mines in the south, the production of lead and zinc has shown an important increase in recent years, but the total values are still too small to have any real significance (see table 174), and are considerably exceeded—especially in the case of zinc—by imports of refined metal.

6. COLOMBIA

(a) *Copper*

Deposits of copper have been discovered in the Cauca valley. Their extent is not known, but from first tests it has been found that the grade is sufficiently high to justify export of the unprocessed ore. The main difficulty in organizing large-scale working appears to be the freight congestion on the Cali-Buenaventura railway.

(b) *Lead and zinc*

During 1951 Colombia produced the more important non-ferrous metals for the first time. A foreign company is working the Medina zinc mine, about 100 kilometres east of Bogotá, and with the present transport facilities production varies between thirty and sixty tons of zinc ore per month. The deposit contains almost pure ore—that which is being sold is nearly 60 per cent grade—and for the time being the processing is limited to crushing and hand-picking. The better quality output is transported in sacks to the coast for export, while the lower quality is being stored until such time as a concentrating plant is built.

Work has also commenced in a small lead mine at Ubala, which initially will refine some ten tons of metallic lead per month.

7. CUBA

(a) *Copper*

Almost the whole Cuban production—which in recent years has varied around 20,000 tons (see table 175)—

Table 175. Cuba: Copper production

(Metric tons of fine copper)

Years	*Production*	*Years*	*Production*
1947	13,727	1950	20,559
1948	16,298	1951	19,531
1949	17,398	1952	17,367

Source: Yearbook of the American Bureau of Metal Statistics.

comes from Matahambre, a mine which was owned by a United States company until 1946. In that year it was taken over by a national company with a certain amount of United States capital, and production capacity has been increased from a maximum of 12,000 tons to over 21,000 tons.

In the district of Pinar del Río, where the Matahambre mine is located, further deposits of unknown importance have been discovered, and a number of other small mines are also being worked, although their output to date has not been substantial. Other veins of copper have been found and are being examined in the Bacuranao district of the province of Havana.

Cuban copper is almost all exported to the United States in concentrates, and so far no smelter has been built in the country.

8. GUATEMALA

(a) *Lead and zinc*

In spite of difficulty of access to the mining regions, Guatemala has developed a mining industry—mainly lead—which has helped to diversify the country's exports in recent years. Production has risen from 334 tons in 1948 to over 7,000 in 1951 (see table 176).

Table 176. Guatemala: Lead production

(Metric tons of fine metal)

Years	*Production*	*Years*	*Production*
1948	334	1951	7,200 [a]
1950	3,695	1952	8,000 [a]

Source: Dirección General de Minería.

[a] Estimated on the basis of exports.

Two United States companies are already operating, and a third is at present negotiating with the Guatemala Government, while a domestic concern is smelting and refining relatively small quantities of metal for the home market.

It is believed that in spite of the fall in prices since May 1952, production increased in the course of that year.

9. MEXICO

The considerable demand on the world market led the Mexican mining industry to work at maximum capacity during 1950-52. Estimated zinc production for 1952 was 231,000 metric tons, the highest ever achieved (3.3 per cent more than in 1950, which was the previous highest level). Copper, which rose to 67,000 tons in 1950—the highest since 1930—fell to some 55,538 in 1952, but even so, the recent figures are the highest in the last ten years.

Table 177. Mexico: Production of copper, lead and zinc

(Metric tons)

Years	*Copper*	*Lead*	*Zinc*
1948	59,076	193,317	179,029
1949	57,246	220,764	178,402
1950	61,698	238,078	223,530
1951	67,351 [a]	225,468	180,064
1952 [b]	55,538	246,000	231,000

Source: Dirección General de Minas y Petróleo.

[a] According to the *Yearbook of the American Bureau of Metal Statistics*, copper production in Mexico was 55,225 metric tons in 1951—less than the 59,209 of 1950.

[b] Estimated on the basis of exports. The *Yearbook of the American Bureau of Metal Statistics* shows differences to official Mexican figures.

In 1952, lead also reached the highest level in ten years—246,000 tons—3.3 per cent greater than 1950 (see table 177).

In 1951 prospects became somewhat unfavourable for lead, and even more so for zinc. This situation was more marked in 1952, since the prices were less attractive than in previous years, doubtless for the following reasons: (*a*) shortage of known reserves which could be worked profitably under present taxation conditions; (*b*) inadequate or complete lack of transport and (*c*) high taxes based on production volume, regardless of the grade of ore or of the profits shown by the mine. This form of taxation tended to discourage both the prospecting for, and the working of, new deposits.

The government has attempted to correct these difficulties and to encourage the industry. A special commission was formed in 1951 to further the construction of roads to the mining centres in the interior, but although this proved to be of some assistance to the small mines, it is essential that there should also be a considerable improvement in the railway system. As regards the study of reserves, a mining investigation committee was formed in 1944, which today is known as the Instituto Nacional de Investigaciones de Recursos Minerales (National Institute for the Investigation of Mineral Resources) which has completed a study of the State of Oaxaca and is at present investigating mining prospects in the State of Chihuahua. The work is of necessity slow, and cannot be expected to result in an immediate increase in production. In the case of the taxation system, the organization which fixes the values of the metals for tax purposes is authorized in special cases to make adjustments and to offer subsidies to compensate for excessive taxes.

It is worth mentioning that in 1951 and 1952 the high prices and firm demand gave rise to a certain amount of exploration, and that the number of applications for prospecting and working which were presented in the respective offices was higher than the average during recent years.

(a) *Copper*

The outlook for the copper reserves makes it doubtful if the generally high figures for recent production can be appreciably exceeded in the coming years.

Between 20 and 25 per cent of the Mexican copper production comes from mines where it is mixed with lead, silver, zinc, and, at times, gold. Since the copper in these mines is in small quantities, together with the other metals, the development of the workings depends upon the incentive to produce the basic metals: lead and zinc. The remaining 75 per cent comes from purely copper deposits in the northern states, mainly Baja California and Sonora, and although at the beginning of the century these deposits made Mexico a more important copper producer than Chile, for more than ten years now they have been on the road to exhaustion. A similar situation exists in Cananea, where the output of high-grade ores is now reduced to a few thousand tons a year. To replace them, a plant was constructed with United States Government assistance during the late war, to produce 24,000 tons of copper per year, making use of low-grade ore. The El Boleo mine in Baja California is also on the decline, in spite of the fact that the Mexican Government, which bought the mine some years ago, has invested a certain amount in a search for new reserves, apparently without success. In Sonora there is also a group of purely copper mines, of which the most important, Moctezuma, belongs to a United States company. Certain investments have been made in this sector; Moctezuma has been slightly enlarged, and new mines have been opened, but the total production of the group was less than 11,000 tons of fine copper in 1950, and therefore, unless some important discovery is made, nothing outstanding is to be expected from this district in the future.

(b) *Lead*

This is at present the most interesting metallic mining product in Mexico, representing in 1950 nearly 32 per cent of total exports. Since 1947, output has been maintained at the high level of around 230,000 tons per year, which is probably maximum production capacity. There was a slight decline in 1951, with a recovery in 1952, but it is considered that the reserves in the known deposits are gradually becoming exhausted. Lead also appears in Mexico in mixed ores, together with silver, zinc and copper, in varying proportions. Since zinc is seldom worked separately, or from mines containing this metal alone, the exploration and development of lead will influence, to an extent of some 10 per cent, the zinc output, and proportionately about 25 per cent the present copper extraction capacity.

In 1951 and 1952 there was some exploration and investment activity in lead. A United States company explored the Iguala district, and has started to prospect large areas of the Pacific Coast, but so far nothing is known of any important discoveries. At the same time, many small new mines have been opened up, and existing workings have been extended. There are also several ore-processing plants, mainly selective flotation, under construction or completed (see table 178).

Table 178. Mexico: Capacity of selective flotation plants for mixed ores, built or under construction, since 1950

(In tons)

Location	*Daily ore capacity*
Zimapán, Hidalgo	100
Cerralvo, Nuevo León	50
Cosalá, Sinaloa	400
Sombrerete, Zacatecas	400
Zoncilla, Chihuahua [a]	400

Source: Dirección General de Minas y Petróleo.

[a] Owned by Frenillo, under government administration.

The increase in capacity of these plants is sufficient to treat some 400,000 tons of ore per year, and as from 1953 it is expected that approximately 27,000 tons of lead should be produced over and above the 1951 output.

Finally, for smelting and refining, a plant was set up in Cadereita, Queretaro, in 1951, capable of handling fifty tons of ore and concentrates per day.

(c) *Zinc*

Mexican production of zinc in bars or concentrates rose to 231,000 tons in 1952, the highest to date. In 1951 the figure was 180,000 tons without, however, any variation in lead, which, since it normally comes from the same deposits as the zinc, usually follows the zinc figures. The explanation of this anomaly is that given earlier in this study; zinc is only taken from the tailings, from which the silver, copper or lead has been extracted, when it will command a satisfactory price.

It is estimated that extensions of lead mines and processing plants will also increase the production capacity for newly-mined zinc to some 200,000 tons per year, but fortunately it is doubtful if this increase will apply in 1953, as the price of zinc has been falling since May 1952.

A small smelter is being built in Monterrey which will have a capacity of 600 tons of metal per month, using ores and concentrates from the small mines in the State of Nuevo León. If the company cannot find a buyer at a better price, the United States Government has promised to buy the metal for a certain number of years at a guaranteed price of 16.5 U.S. cents per pound, at St. Louis, Missouri.

Finally, a sheet zinc plant is being built at Avalos, Chihuahua, by a large United States company, with an investment of some 8 million dollars. With these projects, Mexico, like Peru, will increase the domestic smelting and refining of zinc, and reduce exports of ore and concentrates.

10. Peru

The new Código de Minería (Mining Code) which came into force at the beginning of 1951, establishes a new system, reducing taxes and guaranteeing not to increase them during the next twenty-five years. Amongst other points, material and equipment for the working of the deposits may be imported duty-free by the mining companies, but at the same time, the producer has to pay a 4 per cent customs tax on exports. This payment, however, is only provisional, and is later deducted from income tax, which is the main burden on the mining industry. If the company shows no profit during the corresponding tax period, the 4 per cent is either returned to the exporter, or may be applied to cover subsequent exports, and can even be transferred for the same purpose to a third party. Income tax is based on a progressive scale rising to a maximum of 20 per cent in profits of 100,000 soles or more per year. Since this sum, at the present rate of exchange, is equivalent to about 6,500 dollars per year, it is obvious that, apart from very small firms, the whole of the Peruvian mining industry pays the 20 per cent maximum rate. In calculating the profit, the law allows a deduction of up to 15 per cent of the value of the yield in order to form a reserve fund against the exhaustion of the mine; this is in addition to normal amortization of equipment. This 15 per cent of the value of the yield, however, may not exceed 50 per cent of the profit, which is a further factor limiting the amount of the reserve fund in the case of companies which show relatively small profits.

Under the new law, foreign companies also pay an additional 12 per cent tax on income, while the general laws covering stock companies provide for a 15 per cent tax on dividends.

By this new system, producers pay no tax whatever when metal prices are low, and there are no profits, and in good years they may pay a maximum of nearly 40 per cent of the profit, after deduction of the reserve fund against exhaustion of the mines.

Congress also approved certain regulations regarding the Banco Minero del Perú, by which the bank may give better credit facilities to the small-scale miners and also carry out certain projects to the benefit of large sectors of the mining industry: the building of new concentrators, and electric power stations, of which Huaurochiri is completed, while Chilote, Mico and others are either in construction or being studied. In addition to these direct benefits the bank will also carry out investigations and studies.

The high prices, the liberal conditions of both the new law and taxes, the guarantee of being able to take both profits and capital out of the country, and the encouragement given by the Banco Minero del Perú, have all combined to give a considerable impulse to exploration. In addition to efforts backed by Peruvian capital, many of the large international companies are also carrying out exploration work, and buying up options on deposits.

All the important Peruvian ores reached their peak production during the nineteen-twenties and thirties. Since that time there had been a slow but persistent decline until 1950-52 when there was a considerable upward trend. Previous maximum production has already been surpassed in some metals, and it may be forecast that the same will occur in the remainder during the next few years, when the various installations at present under construction enter into production. The 1952 output of 30,000 tons of copper, 87,000 tons of lead, and 120,000 tons of zinc are double the 1948 figure (see table 179).

Table 179. Peru: Production of copper, lead and zinc
(Metric tons)

Years	*Copper*	*Lead*	*Zinc*
1948	18,069	48,538	58,842
1949	27,959	65,357	72,039
1950	29,930	62,118	87,879
1951	32,589	82,350	101,300
1952	29,806	86,966	120,789
1953 [a]	38,000 [b]	100,000	100,000

Source: Yearbook of the American Bureau of Metal Statistics; Anuario de la Industria Minera del Perú, and information obtained from the Banco Minero del Perú.

[a] Anticipated production.

[b] Not including the output of the large Toquepala mine.

(a) *Copper, lead and zinc*

There are few deposits producing only one metal. The general condition is mixed deposits of lead, zinc, copper, silver and sometimes gold, together with other metals of minor importance. Selective flotation is generally employed, and there are a number of plants of this type whose ore capacity has been increased through new investmento de Tacna, almost on the Chilean border. A pilot in 1952 and to nearly 9,000 in 1953. Including the processing plants which have not been enlarged, the result should be that between 1950 and 1953 the capacity for the treatment of ores will have increased by more than 100 per cent.

The American Smelting and Refining Company is opening up the Toquepala copper mine in the Departamento de Tacna, almost on the Chilean border. A pilot flotation plant is operating with a daily capacity of fifty tons, explorations are continuing to block out the deposit, and an investment of over 180 million dollars is planned, in order to achieve an annual production of some 135,000 tons of refined copper by 1956-57. The Cerro de Pasco Corporation has also extended its processing plants, and in 1952 completed the installation of an electro-thermal zinc refinery with a daily capacity of thirty-five tons. This is in addition to the electrolytic plant, which has the same capacity. The company proposes to raise the total zinc refining capacity to 210 tons per day, but has not yet decided whether this extension should be electro-thermal or electrolytic. In any case, hydo-electric generating capacity is being increased by 77,000 kilowatts, and deposits of coking coal are being explored on both slopes of the Sierra Occidental.

Chapter IV

ENERGY

1. General introduction

The problem of an adequate supply of energy, in its different forms, is a preoccupation of the first order among almost all the nations of Latin America. Energy is not only of vital importance to those countries which must import fuels to satisfy consumption requirements, but apart from the exceptional case of Venezuela, it is no less important to fuel exporting countries. These continue to lose ground as such through the tendency of domestic consumption to absorb an ever-increasing proportion of the production; Colombia, Ecuador and Peru for example. Furthermore, there are cases, such as Mexico, where the exportable surplus is small and may disappear entirely within a few years, unless a substantial increment in production, which will not endanger reserves, is obtained.

A tendency towards greater consumption of energy is a characteristic, and a condition, of economic development. An indication of its importance, within the process of growth in most of the Latin-American countries, is the fact that, between 1947 and 1951, total power consumption—including only hydro-electric power and that generated by coal, petroleum and their by-products—increased at an average annual rate of 9.7 per cent in eight of the principal countries taken together.[1] Among some of these, above all Brazil, Uruguay and Venezuela, the average increase has been even higher (see table 180).

The importance of the energy problem is also underlined by the substantial capital required for the prospecting and working of the sources which provide fuels; moreover, in the majority of cases, the great distances from the deposits to the consumption areas involve high transport costs. Similarly hydro-electric power imposes a need for the investment of very considerable sums for the different phases of production. In addition, to place the power sources in operation, a long period, careful study, and previous planning are all required. Some countries have a power deficit due, in some cases, to an inability to operate domestic sources to capacity, and in others to a shortage of power resources themselves. For such countries, the substantial amount of foreign exchange required for essential imports enforces restrictions on the purchase of other commodities abroad, to the detriment of what would be essential to maintain adequate investment or a satisfactory level of total consumption.

The majority of the Latin-American countries use appreciable quantities of differing types of vegetable fuels, which almost always represent a high proportion of the total energy consumption and, in some cases, exceed consumption of mineral fuels. In many countries, however, a trend to substitute vegetable fuels by those of minerals—in particular, liquid fuels—is evident. In some cases this is due to an exhaustion of forestry resources which have been intensely exploited, and in others, for techincal reasons to ensure greater yields as required by modern machinery and equipment or simply as a matter of preference.

Latin America, as a whole, is both an importer and an exporter of fuel. The exceptional situation of Venezuela and to a lesser degree that of Mexico, Colombia, Ecuador and Peru, makes the region an exporter as a whole. The remaining countries are importers but it can be said, in general terms, that both the known and potential energy resources may—not without considerable difficulties—lead to an improvement in the future situation for most of them.

Outside the two main groups mentioned above, there are wide differences in the individual power situation of each country, as regards immediate problems and their relative importance, the sources of energy available, and the policy towards government investment and private capital. As may be observed in the following sections, specific problems have led to a search for individual solutions in each country. The subjects of electric power and of petroleum are alone examined because they constitute, in general, the principal objective of the existing plans and projects; and since, in many cases, data is lacking on the other fuels or only estimates of doubtful value are available. This does not imply that less importance should be given to fuels, such as coal, natural gas and vegetable fuels, which continue to be used, in some cases, as basic elements for energy production, and in others as essential supplementary sources at peak consumption periods.

2. Electric power

(a) *Introduction*

The present shortage of electric power constitutes one of the most serious problems for the industrial development of Latin America. In almost every country it has been necessary to introduce rationing or restrictive measures on the consumption of electricity; power stations are working at maximum load, and cannot meet new installation requirements.

This situation is aggravated by the need for renewal of equipment or by the necessity to depend on imported fuel. However, work is proceeding on projects for the expansion of generating capacity, some of which are already beginning to relieve the present shortage, at least as regards meeting the demand at the present rates of increase, which are naturally lower than the potential ones.

In general, the per capita consumption is relatively low, which means that an ample margin must be allowed for future expansion even in those countries of Latin America which are at present best supplied with electric power.

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[1] Argentina, Brazil, Chile, Cuba, Mexico, Peru, Uruguay and Venezuela.

Table 180. Latin America: Apparent consumption of energy in some countries

Years	Total consumption (millions of kwh)	Annual increase	Composition of consumption			Production as percentage of consumption	Total consumption (millions of kwh)	Annual increase	Composition of consumption			Production as percentage of consumption
			Hydro-electric power	Mineral coal	Petroleum and derivatives				Hydro-electric power	Mineral coal	Petroleum and derivatives	
		Percentage						Percentage				
			Argentina						*Mexico*			
1947	19,026	9.7	0.9 [a]	12.0	87.1	41.9	18,229	7.5	11.9	8.7	79.4	129.0
1948	23,098	21.4	0.9 [a]	17.1	82.0	36.8	18,563	1.8	13.1	8.9	78.0	132.0
1949	20,296	−12.1	0.8 [a]	12.3	86.9	40.4	20,479	10.3	10.8	8.5	80.7	125.0
1950	23,365	15.1	0.7 [a]	11.3	88.0	36.3	21,127	3.2	9.8	6.7	83.5	139.0
1951	26,282	12.5	0.6 [a]	14.7	84.7	33.5	23,323	10.4	10.7	7.3	82.0	137.0
1952	27,820	5.8	0.6 [a]	11.2	88.2	33.0	–	–	–	–	–	–
			Brazil						*Peru*			
1947	15,127	29.2	26.9 [b]	32.4	40.7	32.4	3,199	15.5	21.8 [a]	9.7	68.5	176.0
1948	16,532	9.3	27.8 [b]	25.0	47.2	42.2	3,419	6.9	21.3 [a]	9.1	69.6	177.0
1949	17,512	5.9	29.0 [b]	21.2	49.8	43.1	3,557	4.1	20.8 [a]	8.0	71.2	176.0
1950	20,666	18.0	30.3 [b]	20.1	49.6	41.9	3.644	2.5	20.6 [a]	7.1	72.3	176.0
1951	23,920	15.7	29.1 [b]	16.5	54.4	39.4	4,120	13.0	18.3 [a]	6.5	75.2	163.0
1952	26,410	10.4	27.9 [b]	14.2	57.9	39.0	–	–	–	–	–	–
			Cuba						*Uruguay*			
1947	3,761	−9.7	– [c]	2.3	97.7	1.5	1,847	18.7	18.7	10.0	71.3	18.7
1948	3,620	−3.7	–	2.1	97.9	1.2	2,119	14.7	18.7	9.6	71.7	18.7
1949	3,973	9.7	–	1.8	98.2	0.7	2,293	8.2	21.2	9.0	69.8	21.2
1950	4,373	10.1	–	0.8	99.2	0.5	2,434	6.2	21.6	8.9	69.5	21.6
1951	4,501	2.9	–	2.0	98.0	0.3	2,786	14.5	14.4	8.6	77.0	14.4
1952	–	–	–	–	–	–	2,766	−0.7	18.9	5.5	75.6	18.4
			Chile						*Venezuela*			
1947	7,396	–	16.2	47.2	36.6	63.1	3,240	57.5	3.7	0.8	95.5	4,759.0
1948	8,524	15.3	16.2	45.7	38.1	60.8	3,913	20.5	3.0	0.8	96.2	4,439.0
1949	8,063	−5.4	19.1	43.2	37.7	63.6	5,165	32.1	3.1	0.7	96.2	3,311.0
1950	7,554	−6.3	21.7	48.3	30.0	70.0	6,289	21.7	3.4	0.7	95.9	3,084.0
1951	9,181	21.5	19.5	43.0	37.5	60.0	6,903	9.7	2.8	0.6	96.6	3,196.0
1952	9,100	−0.9	21.1	47.8	31.1	65.6	6,998	1.3	1.8	0.7	97.5	3,338.0

Source: Economic Commission for Latin America, based on official statistics.

[a] Estimates.

[b] Production of various plants representing more or less 80 per cent of total production.

[c] Not included for lack of data, but the importance as regards total consumption is slight.

[d] Real consumption.

Footnotes: Total consumption does not include vegetable fuel or natural gas. Fuel was considered 20 per cent efficient, calculating the following heating capacity: Petroleum and derivatives: 10,600 cal/kg (excl. Argentina, 10,500 cal/kg). Imported mineral coal: 7,200 cal/kg (excl. Argentina, 7,500 cal/kg). Domestic mineral coal: Argentina, 7,500 cal/kg; Brazil, 5,000 cal/kg; Chile and Venezuela, 7,200 cal/kg; Mexico, 6,500 cal/kg; Peru, 8,000 cal/kg. Coke: 6,000 cal/kg.

Even taking into account the limitations of the estimates and the difficulty of making comparisons because of the use of substitute fuels in some of the countries, fairly considerable differences may be observed in the levels of electric power production. While Argentina and Chile produce more than 300 kilowatt-hours per capita, followed by Costa Rica, Cuba and Uruguay, with between 200 and 300 kilowatt-hours, the remaining countries still show very low levels of production. (See table 181.) These levels are directly related to the degree of economic development achieved, to the extent of urban development, and in certain cases to insufficient encouragement given by government planning and investments to power generation for public services.

Widely differing methods have been adopted in the different countries to encourage electrification. In Brazil, which has the highest generating capacity and potential resources in Latin America, the vast majority of the plants are privately owned, which complicates any national plan for the development of power production. There is also the fact that the State authorities have some autonomy in this matter. In Argentina, Chile and Mexico on the other hand, where more than half the capacity is also in the hands of private companies, there are national electrification plans controlled by an organ of the central government, which also builds and operates new plants. In Colombia, even less progress has been made than in Brazil towards a national plan, and the development of electric power is to a great extent under the jurisdiction of the municipal authorities.[2] In El Salvador, where private enterprise predominates, the electrification programme is under the control of a single government organization, which includes representatives of private groups. This organization is planning and building the new Río Lempa electric power plant—the largest in Central America—the output of which will be distributed through existing

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[2] La Comisión de Planeación Económica (the Economic Planning Commission) of the Colombian Government recently recommended that private capital be given fiscal incentive in order to encourage investment in the production of electricity, considering this method preferable to the formation of State corporations in order to increase the supply.

Table 181. Latin America: Per capita production of electricity in fifteen countries, 1951 [a]

Kilowatt-hours	*Countries*
More than 300:	Argentina
	Chile [b]
From 200 to 300:	Costa Rica
	Cuba
	Uruguay
From 100 to 200:	Brazil
	Mexico
	Panama
	Peru
	Venezuela [c]
Less than 100:	Bolivia [c]
	Colombia
	Dominican Republic
	Ecuador
	El Salvador
	Guatemala [c]
	Haiti
	Honduras
	Nicaragua [c]
	Paraguay

Source: Economic Commission for Latin America, based on official and private sources.

[a] In general production is proportional to consumption, the difference being due only to transmission and distribution losses.

[b] Excluding electricity generated by the export mining industry.

[c] Public utility companies only.

private networks. In the same way, the national electrification programmes in Costa Rica and Uruguay are also being carried out by a government organization. In marked contrast to the countries mentioned above, there are others which, despite the shortage, have not as yet drawn up any policy for the development of electric power, nor any national plan for studying potential resources.

The rate of increase in electricity production in Latin America is substantial, being seldom less than 8 to 10 per cent, in spite of the slow increase of capacity. This would appear to indicate higher potential rates of increase of consumption, and it may therefore be assumed that the main obstacle preventing a more rapid expansion has not been lack of demand, but rather the problems of financing and of obtaining equipment during the war and post-war periods, apart from the inadequate planning mentioned earlier. Several Latin-American governments have been budgeting increasing sums for the construction of electric plants, which have also become one of the preferential objects of external loans. Between 1947 and 1952 the International Bank for Reconstruction and Development and the United States Export-Import Bank have together provided 330 million dollars for public and private electrical development in Latin America; this constitutes 31.2 per cent of all loans from these banks to Latin America.

The fact that, in general, production capacity still fails to satisfy demand clearly indicates that a considerably larger volume of capital investment will be necessary for some years to come. This capital will indirectly strengthen the balance of payments since the additional power available will permit the development of new natural resources, substituting hydraulic power for imported fuel, encouraging industrial development, replacing non-essential imports and finally improving rural productivity by the introduction of cheap power.

Prevailing differences in Latin America as regards the supply of electric power lead to an examination below of specific cases of particular interest.

(b) *Argentina*

Faced with the necessity to reduce fuel imports, the chief source of electric power in Argentina, it became necessary in March 1952 to introduce rationing of industrial, commercial and residential electricity consumption in the capital and in the province of Buenos Aires. This emphasizes the acute shortage of electric power in Argentina, which constitutes one of the most critical points in the economic development. This is no new problem; it has been developing over the course of several years as a result of the increasing rate of demand, the difficulties in supply of fuel and the slow rate of increase of installed capacity. The public utility companies have not increased their production at a rate comparable to that of other South American countries. In 1952 the volume of electricity generated was approximately the same as in 1951. The increase in 1951 was 6.5 per cent, and between 1946 and 1950 the average annual rate of increase had been 7.9 per cent (see table 182). The shortage of power from public sources has caused industrial concerns to install their own plants, and the total amount of power, from both public and private sources, generated in 1951 may be estimated at 5,500 million kilowatt-hours of which only 2.7 per cent was hydro-electric.

Table 182. Argentina: Production of electric power [a]

Year	*Millions of kwh*	*Percentage annual increase*
1947	3,576	9.6
1948	3,911	9.4
1949	4,121	5.4
1950	4,430	7.5
1951	4,718	6.5
1952	4,710	−0.2

Source: Síntesis Estadística Mensual.

[a] Public utility companies only.

The total installed capacity available for public service at the end of 1952 may be estimated at 1.5 million kilowatts. Since 1946, an additional 200,000 kilowatts, approximately, has been brought into service, of which 106,000 kilowatts is supplied by private utility companies in the city of Buenos Aires, and the remainder by plants constructed under the first five-year plan. The present figure is 15.4 per cent higher than six years ago, but it must be recalled that the installed capacity of the public utility companies increased by only 10.7 per cent during the entire period 1937-46.

It may be expected that projects included in the government's second five-year plan will begin to relieve the shortage. During the period 1953-57 it is hoped to complete thirty-one hydro-electric plants which are at present under construction, with a capacity of 353,000 kilowatts and nine thermo-electric plants producing 406,000 kilowatts. The most important of the thermo-electric plants is San Nicolás, of 300,000 kilowatts, which should come into service in 1954-55. Within the same period, work should be commenced and completed to provide an increase of 18,000 kilowatts of hydro-electric, and 306,000 kilowatts of thermo-electric power in addition to a thermo-electric plant of 300,000 kilowatts designed to meet consumption increases in Greater Buenos Aires.

(c) *Brazil*

The years 1951 and 1952 have been critical for Brazil as regards the supply of electric power. Rationing has been necessary in the areas of São Paulo, Rio de Janeiro and Rio Grande do Sul while it has been impossible to meet the demand for new connexions, which exerts a constant pressure on the load factors of the supply companies. In 1952 approximately 370,000 kilowatts came into service and only 38,000 in 1951; these small additions in relation to the needs mean that the over-all capacity at the end of 1952 will be only 32 per cent higher than it was in 1949. (See table 183.) The total output of electric power in 1952 was barely 4 to 5 per cent higher than that of 1951,[3] which contrasts with estimated previous annual rates of increase varying between 8 and 11.5 per cent in different parts of the country.

For some years there have been large expansion projects for the main private systems in the industrial region of Brazil and recently other expansions have been commenced by both the state and federal governments. The majority of these projects will use hydraulic power and will naturally take a long time to build. The shortage of fuel in Brazil is a deterrent to any large-scale thermoelectric programme, although it has recently been necessary to make use of this system—as effected in Mexico under similar circumstances—as a short-term solution to the difficult siutation in São Paulo. Problems of financing and of shortage of electrical equipment have also proved serious obstacles.

Table 183. Brazil: Installed capacity and production of electric power

Year	*Installed capacity*		*Production*	
	Thousands of kw	*Percentage annual increase*	*Millions of kwh*	*Percentage annual increase*
1947	1,534		6,290	
1948	1,625	5.9	7,140	13.5
1949	1,735	6.8	7,610	6.6
1950	1,883	8.5	8,208	7.9
1951	1,921	2.0	8,758	6.7
1952	2,297	19.5	9,100	4.5
1953[a]	2,545	10.8	..	..
1954[a]	2,800	10.0	..	..

Source: Conjuntura Económica.
[a] Estimated.

As a result of work commenced in recent years it is hoped that the increase of generating capacity will be 248,000 kilowatts in 1953, of which approximately 44 per cent will be used to supply the São Paulo-Rio area. It is anticipated that 250,000 kilowatts will come into service in 1954, 60 per cent of which would supply that same region. Studies of the possible use of new waterfalls have been intensified, and there is no doubt that the expansion of power production capacity will continue to be one of the main investment problems. But, in the meantime, Brazilian industry will inevitably suffer from the restrictive influence of power shortages.

(d) *Chile*

In the winter of 1952, after two years of power shortage, hydrological reasons caused a further deterioration of the supply situation in the central zone of Chile. Rationing became necessary, with consequent dislocation of industrial production. The deficit in 1952 was estimated to be some 470,000 kilowatts per day during periods of maximum load; since it is not expected that this will be remedied until the 65,000-kilowatt Cipreses plant comes into operation in 1954, rationing will continue during the winter of 1953.

The output of electricity from companies supplying for public use, which increased at a cumulative annual rate of the order of 7 per cent during the period 1940-45, and over 10 per cent in 1945-50, showed further increases of 10.6 per cent in 1951 and 10.7 per cent in 1952. (See table 184.) Added to the output of certain other plants which are not included in the official statistics, a total of some 1,850 million kilowatt-hours was generated in 1951. Apart from production for public service, the large Chilean mining companies have their own generating plants, output of which in 1952 was 70 per cent above the previous year. They have been expanded in the last ten years to a present capacity of more than 260,000 kilowatts.

Table 184. Chile: Installed capacity and production of electric power

Year	*Installed capacity*[a]		*Production*[b]	
	Thousands of kw	*Percentage annual increase*	*Millions of kwh*	*Percentage annual increase*
1947	282	0.7	1,083	
1948	356	26.2	1,166	7.7
1949	431	21.0	1,281	9.9
1950	456	5.8	1,520	18.6
1951	456	0.0	1,681	10.6
1952	478	4.7	1,862	10.7

Source: Estadística Chilena and a study made by the Empresa Nacional de Electricidad in July 1950.
[a] Does not include the plants of the export mining companies.
[b] Data from thirty-two plants.

The activities of the Corporación de Fomento (Chilean Development Corporation) and the Empresa Nacional de Electricidad — whether through their own plants or through the financing of private plants connected with public service—have increased installed capacity at a cumulative rate of 5 per cent in 1940-45, and 10 per cent in 1945-50, principally from hydro-electric plants. In 1951 and 1952 the increase declined to only 16,000 kilowatts, but the electrification plan for the next twelve years will ensure that sufficient electric power is available to cover the economic development of the country, always assuming that a further 80,000 kilowatts at least is installed in those areas which are supplied by private companies. This plan provides for the completion of the installing of 65,000 kilowatts by the end of 1953 and a further 3,600 kilowatts in 1954, while other new projects include 27,500 kilowatts for 1955, 78,000 for 1956, and 42,500 for 1957. Finally, plans are being studied for the installation of 252,000 kilowatts between 1960 and 1964.

(e) *Colombia*

As a result of the slower increase of industrial production, the high rate of production of electric power, which had been maintained in previous years, declined in 1951. During that year there was an increase of only 5.4 per cent compared with rates of increase of over 11 per cent annually between 1945 and 1950, which had been main-

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[3] Estimated on generating data for January–August 1952 given by Brazilian Traction (3,103 million kwh) which produces 60 per cent of the total.

Table 185. Colombia: Production of electric power

Year	Total production		Production for industrial use	
	Millions of kwh	Percentage annual increase	Millions of kwh	Percentage annual increase
1947	517	11.7	147	7.7
1948	545	5.4	167	13.6
1949	625	14.7	193	16.0
1950	705	12.8	220	12.9
1951	743	5.4	231	6.1
1952	840	12.0	261	12.8

Source: Revista del Banco de la República. Figures for three large public utility companies; *La Actividad Económica Colombiana.*

Table 186. Cuba: Consumption of electric power

Year	Millions of kwh	Percentage annual increase
1947	486	–
1948	544	11.9
1949	586	7.7
1950	645	10.1
1951	706	9.5
1952	778	10.1

Source: Banco Nacional de Cuba and *Cuba Económica.*

[a] Power sold by the Compañía Cubana de Electricidad only, representing approximately 50 to 55 per cent of the total consumed in the country, including power generated in the sugar mills.

tained for both industrial and other consumption. (See table 185.) With the return to normal industrial conditions, and the commencement of new activities, the general rate of increase in 1952 was greater than that of 1951. It is estimated that during the year some 740 million kilowatt-hours was generated, the greater part from hydro-electric plants.

The reduced rate of increase of demand is only one of the factors limiting the consumption of electric power in recent times; there has also been a lack of production capacity. The shortage of power in Colombia is at present serious and is hindering industrial development, and the absence of any co-ordinated electrification plan impedes a remedy for the deficiency; at the same time the financial situation of some companies has not permitted renewal and expansion of equipment. The government, however, has carried out some projects resulting in the installation of an additional 70,000 kilowatts in recent years, representing almost 18 per cent of the total capacity installed for public service, which may be estimated at a total from all sources of some 400,000 kilowatts. Projects actually under construction and study cover a new increase of 170,000 kilowatts during the next few years, but this will not fully meet the potential demand.

(f) *Cuba*

Progress in electrification in Cuba has been slow in recent years. The main demand comes from the sugar industries [4] which have their own electric plants and only consume a small fraction of power generated for public service. The plants installed in the sugar mills—which have a theoretical capacity greater than that of the public utility companies—only work to full capacity during three to six months of the year in normal times. They therefore have sufficient flexibility to meet the larger demand which may be caused by bigger harvests, as was the case in 1952.

Apart from the sugar industry there has been a rapid increase in the consumption of electric power. Cuba shows a rate of 10 per cent per year in 1952, slightly greater than the average of 9.5 per cent for 1943 to 1951 (see table 186).

The rates of increase of consumption have led to various projects for the installation of new plants for public service. In 1950 the public utility companies had a capacity of some 185,000 kilowatts and a programme is being carried out to give an increase of 140,000 kilowatts for 1957, of which 25,300 will already be in service in 1952—that is 37 per cent higher than the 1950 figure—intended to supply the main cities other than the capital. Industrial concerns are also carrying out large-scale expansion for their own purposes. It is worth mentioning that almost the whole of the power is being generated by thermo-electric plants.

(g) *Dominican Republic*

As in Cuba, the main demand for electric power comes from the sugar mills which have their own generating plants. The increase in consumption has been one of the most rapid in Latin America in recent years. The principal supply company doubled capacity between 1948 and 1952, reaching a total of between 15,000 and 20,000 kilowatts, with a further 7,500-kilowatt expansion projected. All these plants are thermo-electric.

(h) *Ecuador*

The present rate of increase of the production of electric power in Ecuador is 8 per cent, and it has therefore been necessary to prepare expansion projects covering the installation of an additional 15,000 kilowatts in 1954-55, over an installed capacity which was estimated in 1951 at approximately 35,000 kilowatts. The uncertainty regarding future supplies of liquid fuels from domestic sources in Ecuador—whose possibilities of importing fuel are slight—has emphasized the urgent need to develop sources of hydro-electric power, especially if industrialization is to be accelerated.

(i) *Mexico*

During several months of 1950, periods of drought made power rationing necessary in the central zone of Mexico, but since then there have been no shortages except in the north and north-east of the country and some parts of the interior where generating capacity has not expanded at a sufficient rate to meet the demand. Total production of electric power in 1952 attained a level 8.8 per cent higher than in 1951, which in turn was 11 per cent above the figure for the previous year. (See table 187.)

The greater availability of electric power in Mexico in recent years has been largely the result of the construction of hydro-electric plants undertaken by the government and by the principal private company operating in the central zone. However, a decisive influence from the point of view of flexibility was the fact that while the large hydro-electric plants were under construction, it was possible to meet immediate requirements with thermo-electric plants, to which the use of natural gas has also contributed. This

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[4] In Cuba the sugar industry in 1951 consumed 34 per cent of the total, other industries 19 per cent, commerce 18 per cent, the government and municipalities 11 per cent, and domestic consumption 17 per cent. (Estimated by the Economic Commission for Latin America.)

Table 187. Mexico: Installed capacity and production of electric power

Year	Installed capacity: Thousands of kw	Installed capacity: Percentage annual increase	Production: Millions of kwh	Production: Percentage annual increase
1947	958	–	3,598	–
1948	1,040	8.6	3,969	10.3
1949	1,097	5.5	4,328	9.0
1950	1,273	16.1	4,423	2.2
1951	1,400	10.0	4,908	11.0
1952	1,542[a]	10.0	5,337	8.8
1953[a]	1,719	11.5	...	..
1954[a]	1,825	6.2	..	..

Source: Comisión Federal de Electricidad.

[a] Estimated by Economic Commission for Latin America.

type of plant has been installed by both government and private electric companies, and also by a considerable number of industrial concerns. In 1951, 52.5 per cent of the total production of electric power came from thermal plants compared with barely 36 per cent in 1946, and the increased output from this type of plant compensated to a certain extent, especially in 1950, for the shortage of hydro-electric power.

The first stages of the large electrical projects commenced in 1943 are now in course of termination, while further work is in hand with the object of meeting consumption demands from 1955 onwards. In 1950 and 1951, out of a total increase of capacity of 303,000 kilowatts, which raised total capacity to 1.4 million kilowatts (rather more than double the quantity available between 1940 and 1943), 202,000 kilowatts were installed by the government, in accordance with their electrification programme. It is hoped that units constructed by the government and by private electricity companies to a total of 141,000 kilowatts will come into service during 1952, while units under construction should allow the installation of 177,000 kilowatts in 1953 and 106,100 kilowatts in 1954 (see table 187).

If it is assumed that the total electric power generated in Mexico must increase by about 11 per cent per year in order to meet the demand, then the programmes planned up to 1954 are inadequate. Although the partial interconnexion of the principal networks of the central zone will to a certain extent compensate for the shortage by allowing more efficient use to be made of installed capacity, there is always the possibility that hydro-electric power may again be affected by water shortage. The industrial and urban growth in Mexico make the rate of electrical expansion a very urgent matter. Up to the present, the government has attempted to solve the problem by means of large-scale national programmes but in spite of these efforts it has not been possible to create a sufficient margin of reserve. During the last two years increasing attention has been paid to the need for expansion of power facilities in the agricultural and industrial regions in the interior, and also, to a lesser degree, to rural electrification. The shortage in these areas, however, was still sufficiently severe to necessitate restrictive measures on consumption in 1951 and 1952.

(j) *Peru*

The shortage of electric power experienced in Peru in recent years was relieved in January 1952 by the inauguration of a 44,000-kilowatt hydro-electric plant. The generation of electricity, whose annual rate of increase has never passed 2 per cent since 1947, was thereby raised by 15 per cent, and it is estimated that the output in 1951 was 860 million kilowatt-hours.

A future expansion of 22,000 kilowatts is planned for the plant mentioned above and a further 50,000 kilowatts is under construction in connexion with the Chimbote steel plant, with a possible expansion to 150,000 kilowatts. There is a further project for supplying 65,000 kilowatts to a zinc refinery. Work has not yet started on a 140,000-kilowatt project of the largest private company, but there are further official and private plans in connexion with the mining industry. The development of the generation of electricity in Peru is based almost exclusively on hydraulic power, which already covers 90 per cent of the total.

Table 188. Peru: Production of electric power [a]

Year	Millions of kwh	Percentage of annual increase
1947	256	9.5
1948	293	13.9
1949	314	7.1
1950	322	2.5
1951	344	6.8
1952	375	9.0

Source: Empresas Eléctricas Asociadas.

[a] Power generated by Empresas Eléctricas Asociadas, representing approximately 40 per cent of total production.

(k) *Uruguay*

Uruguay is no exception to the high rate of increase of electric power generation seen in Latin America during the post-war period. Up to 1952, the average annual rate was more than 11 per cent, reaching a production of 753 million kilowatt-hours (see table 189). During 1951, hydrological causes were responsible for a considerable reduction in the generation of hydro-electric power, but this was offset by bringing thermal plants back into service.

Table 189. Uruguay: Installed capacity and production of electric power

Year	Installed capacity: Thousands of kw	Installed capacity: Percentage annual increase	Production: Millions of kwh	Production: Percentage annual increase
1947	158	22.7	465	17.6
1948	194	22.0	532	13.6
1949	227	17.0	574	8.0
1950	229	0.8	616	7.4
1951	234	2.5	682	10.3
1952	235	0.4	753	10.3

Source: Administración General de las Usinas Eléctricas y Teléfonos del Estado.

Although in the last three years there has been no increase of installed capacity, the increasing demand has been met without difficulty by the 128,000 kilowatts of hydro-electric power which came into service between 1946 and 1949. There is a plan for the near future which will supply an additional 61,200 kilowatts of thermo-electric power, representing a 26 per cent increase over the

Table 190. Venezuela: Production of electric power

Year	Production [a] (millions of kwh)	Percentage annual increase
1947	317	17.4
1948	385	21.4
1949	453	17.7
1950	522	15.2
1951	620	18.8
1952	722	16.4

Source: Dirección General de Estadística, Caracas.

[a] Comprises approximately 95 per cent of total production, not including that of the petroleum companies.

present figures, while later plans include 90,000 kilowatts of hydro-electric power.

(l) *Venezuela*

As a result of increases in productive capacity, and tariff reductions since 1945, the total power generated in Venezuela, excluding that produced by the petroleum companies for their own purposes, was almost trebled between that year and 1951, and in 1952 still shows a considerable rate of increase. The average annual cumulative rate of increase for this period was 17.4 per cent (see table 190), while the 1952 increase is estimated at 16.4 per cent.

The total generating capacity for public service rose from 175,000 kilowatts in 1945 to 236,000 kilowatts in 1952.[5] There was no increase in capacity in 1952, but the electrification programme of the Corporación Venezolana de Fomento provides for a considerable increase in 1955. This does not take into account possible future developments on the Caroni river in connexion with investments in iron mining. The projects of the Corporación Venezolana de Fomento include both hydro-electric and thermo-electric plants; work has already commenced on the installation of small thermal plants in the more heavily populated rural areas as a first step toward a rural electrification system which in due course will be connected to the main hydro-electric networks.

The attention which has been given to electrical development in Venezuela has been favourable for industrial development and to a certain extent has compensated for other disadvantages. The completion of the electrification programme will undoubtedly require still greater efforts.

(m) *Central America and the Republic of Panama*

The present accelerated economic development of the Central American Republics has emphasized in the last two years the acute shortage of electric power, which has been only very slightly eased by increases in the capacity of the public utility companies and the installation of private plants by industrial concerns. In almost all these countries both consumption and the acceptance of new loads have been strictly controlled.

The total installed capacity rose to some 185,000 kilowatts in 1951, probably more than one-third of which was provided by private plants installed by the fruit companies and other commercial concerns for their own purposes. Approximately 75 per cent of the total capacity available for public service is installed in Costa Rica, El Salvador and Guatemala, the countries where the increase in power production has been the most rapid—from 10 to 12 per cent per year from 1948-49—although it is still insufficient. (See table 191.) These countries increased their capacity between 1948 and 1951 and although the joint increase was small, it appears considerable when compared with the war-time figures, since it represented a 10 per cent annual rate of increase. On the other hand the remaining three countries showed almost no change in capacity.

The prospects for the various countries of Central America at present differ widely. Very considerable capacity increases are necessary to meet the normal increase in demand in zones where electric power is already available. If it is to be introduced into the vast area where it is now non-existent—as is the present intention, for example, in El Salvador and Costa Rica—then an even greater rate of increase will be necessary. Costa Rica, with the best electric supply of any country in the region and the most accessible hydro-electric resources, already has projects being carried out for an annual capacity increase of 12 per cent. The first units, 10,000 kilowatts, will be put into service in 1954. In El Salvador, under the government electrification programme, construction was commenced in 1949-50 of a hydro-electric plant which will add 30,000 kilowatts at the end of 1953; plans are already well ahead for the installation of a further 15,000 kilowatts in 1954-55, without taking into account certain small private projects. In Guatemala, on the other hand, the anticipated increase for 1953 will be barely 3,000 kilowatts although work should commence in that year on other hydro-electric projects. Preliminary studies have barely commenced in Nicaragua and Honduras.

Table 191. Central America and Republic of Panama: Generation of electric power [a]

Year	Costa Rica [b]		Guatemala [c]		Nicaragua [c]		El Salvador [c]		Panama [d]	
	Millions of kwh	Percentage annual increase	Millions of kwh	Percentage annual increase	Millions of kwh	Percentage annua increase	Millions of kwh	Percentage annual increase	Millions of kwh	Percentage annual increase
1947	123	–	59	–	22	–	46	–	69	–
1948	126	2.4	64	8.5	22	–	50	8.7	70	1.4
1949	143	13.5	72	12.5	23	4.5	54	8.0	75	7.1
1950	160	11.9	83	15.3	24	4.3	58	7.4	85	13.3
1951	173	8.1	–	–	–	–	68	17.2	88	3.5
1952	–	–	–	–	–	–	–	–	92 [e]	4.5

Source: Costa Rica, Banco Central de Costa Rica; El Salvador, Instituto de Estudios Económicos; Guatemala, based on data from the Empresa Eléctrica de Guatemala; Nicaragua, Dirección General de Estadística; Republic of Panama, *Estadística Panameña.*

[a] Omitting Honduras. The series are not mutually comparable.

[b] Includes an estimate of power generated by private plants.

[c] Includes only power generated by public utility companies.

[d] Power generated in the cities of Panamá and Colón only.

[e] Preliminary estimate.

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[5] In 1952 the mining and petroleum companies also had a generating capacity, for their own purposes, of 124,600 kilowatts.

Table 192. Latin America: Production of crude petroleum
(Thousands of cubic metres)

	1950	*1951*	*1952*	*Per cent increase*	
				1950–1951	*1951–1952*
Argentina	3,730	3,890	3,909	4.3	0.5
Bolivia	99	83	85	−16.0	1.6
Brazil	49	100	109	−204.1	8.7
Chile	100	120	144	20.0	20.0
Colombia	5,415	6,105	6,140	12.7	0.1
Cuba	25	19	6	−24.0	−68.4
Ecuador	418	431	452	3.1	4.9
Mexico	11,746	12,525	12,545	6.6	0.2
Peru	2,393	2,528	2,593	5.6	2.6
SUB-TOTAL	23,975	25,801	25,983	7.6	0.7
Venezuela	86,929	98,921	104,969	13.8	6.1
TOTAL	110,904	124,722	130,952	12.5	5.0

Source: Official statistical bulletins: United Nations, *Bulletin of Statistics;* for Cuba, the journals *World Oil* and *Petróleo Interamericano* (United States).

By 1953-54 there will be sufficient capacity available in El Salvador to meet the demand in the central zone for the following three or four years. In Costa Rica, however, proposed expansions in the near future will not satisfy the expected increase in demand, and the shortage will become more acute until such time as projects at present being carried out by the Instituto Costarricense de Electricidad are completed. These will meet the demand in the central zone until 1960. Unless emergency measures are taken the situation in the other three countries will be very serious, and is already proving to be a considerable hindrance to economic development.

3. PETROLEUM

(a) *Introduction*

Due to the expansion of Venezuelan production, which accounts for a little over 80 per cent of the total, the entire petroleum output of Latin America during 1951 and the first half of 1952 maintained a generally high rate of increase, the figures being 12.5 per cent and 8.2 per cent respectively, as compared with 1950 and the first six months of 1951. The Venezuelan product has enjoyed a steady market in Latin America itself, where consumption figures have increased by about 12 per cent annually, and in the United States and Europe where demand has risen both through rearmament needs and as a result of the Iranian oil crisis. It has been possible to take advantage of this favourable external situation because of the great wealth of the Venezuelan deposits and the government policy of giving full encouragement to the increasing foreign investments. During the second half of 1952, the demand from abroad slackened somewhat and the rate of expansion tended to contract considerably, though for reasons which appear to be only temporary in character. As a result, the total for the whole of 1952, for all the countries taken together, reached a figure 5 per cent higher than the previous year.

While Venezuelan production rose by 13.8 per cent in 1951 and 5.3 per cent in 1952, the rates of increase for the other producer countries varies considerably. In Argentina, Colombia and Mexico, production for 1952 remained stationary; in Peru there was a moderate increase; and in the remaining countries (Bolivia, Brazil, Chile and Ecuador), whose influence on the total is very small, the rates of increase were relatively high (see table 192).

Refining capacity in Latin America has increased to a relatively higher proportion owing to government protective and development policies. The expansion of this phase of production, which has been carried out for a number of years in Venezuela by foreign companies, has now been stimulated by the additional demand for petroleum, due to the closing down of the Abadan refinery in mid-1951. Government-owned enterprises in Mexico and Colombia have had to extend their refining capacities in order to offset the rise in domestic consumption. They have relied partly on credits from the United States for this purpose. Brazil and Chile have substantial projects in hand, sponsored by their respective governments, designed both to diminish the heavy foreign exchange burden caused by liquid fuel consumption and to assist the future development of their infant petroleum extraction industries (see table 65).

Future prospects are favourable, owing both to the existence of enormous but unexplored areas of potential resources and the encouraging rise in the domestic and export demand. The development of new zones of production, however, implies a high level of investment in relation to the financial resources of Latin America. Even as regards present output, the proportion of proven reserves is lower than is strictly advisable, and a higher rate of investment in this sphere, which involves a greater element of risk, is necessary.

Thus, in regard to the possible future development of resources, capital requirements are of the utmost importance. The various Latin-American countries have adopted different policies with regard to this problem, so that it is possible to distinguish between two separate groups of countries within the general over-all picture of the Latin-American petroleum industry. These groups comprise:

(1) Those countries which are exploiting their deposits exclusively or to a substantial degree by means of government organizations and domestic capital, i.e., Argentina, Bolivia, Brazil, Chile and Mexico. With the exception of Mexico, these are countries which do not produce sufficient petroleum to satisfy their domestic needs.

Table 193. Latin America: Quantity of crude petroleum refined
(Thousands of cubic metres)

	1950	1951	1952	*Per cent increase*	
				1950–1951	1951–1952
Argentina [a]	6,351	6,310	6,603 [b]	−0.6	4.6
Bolivia	99	67	70 [b]	−32.3	..
Brazil [a]	78	84	..	7.7	..
Colombia	1,512	1,575	1,825	4.2	14.6
Cuba	315	372	..	18.1	..
Ecuador	257	269	281	4.7	1.9
Mexico [a]	8,893	9,750	9,768	9.7	7.6
Peru [a]	2,155	2,270	..	5.3	..
Uruguay	848	998	1,156 [b]	17.7	15.8
SUB-TOTAL	20,508	21,697	..	5.8	..
Venezuela	14,497	18,297	20,191	26.2	8.8
TOTAL	35,005	39,994	..	14.2	..

Source: Official statistical bulletins and journals *World Oil* (United States) and *Petroleum Press Service* (Great Britain).

[a] Figures for these countries refer to the volume of derivatives obtained. For the remainder, figures refer to crude oil, refined.

[b] Estimates.

(2) Countries where private foreign investments predominate, i.e., Ecuador, Peru and Venezuela, which are net exporters. Colombia occupies a position midway between these two groups, as the government of this country has now taken over the operation of one of the main oil fields, the concession for which had expired.

The group of countries relying on foreign investments for the exploration and working of petroleum deposits (Colombia, Ecuador, Peru and Venezuela) is providing a fresh stimulus for the flow of private capital through either the natural conditions of the resources or the type of legislation being adopted. In Venezuela, where a policy of dividing the available profits equally between the government and the oil companies has been practised, the daily yield per well, over the period 1947-51, has been 35 cubic metres. On the other hand, the equivalent yield over the same period in Colombia, Ecuador and Peru has been approximately 12.0, 1.8 and 1.4 cubic metres respectively, and efforts to offset the negative effect upon the interest of foreign investors, are being made through more favourable petroleum legislation.

(b) *Venezuela*

At present, this country is maintaining the highest rate of growth in its petroleum industry. Production for 1951 was 13.8 per cent higher than that of the previous year, while the cumulative increase during the period 1947-51 amounted to 9.3 per cent annually. Within the same period an exceptionally high level was reached in 1948, followed by a crisis in 1949 and two successive years of recovery above the normal rate of output. In 1952, there appears to be a return to greater stability, with an annual rise of slightly more than 5 per cent and an upward trend at the end of the year, which presages a recovery in 1953.

Investments on the part of foreign companies have maintaned a high level during the last few years, amounting to an annual figure of approximately 200 million dollars. The three most important companies, which together produce 90 per cent of the crude petroleum, announced an investment programme for 1952 of 280 million dollars, of which 50 per cent is to be devoted to production, 18 per cent to exploration, and the remainder to be invested in refineries, pipelines and general construction work. According to this programme, the expansion of the new refinery on the Paraguana peninsula, where two companies can at present refine 8 million cubic metres annually, is being continued. One of these companies is also building an extension which will add about 4.5 million cubic metres to its total capacity. The pipelines which transport the crude oil from Lake Maracaibo to the Paraguana peninsula are works of outstanding importance; the second pipeline, 240 kilometres in length, was finished in July 1952. With the completion of these projects the total refining capacity for 1953 will amount to approximately 23.6 million cubic metres per year, or about 23 per cent of the 1952 crude production. This represents a substantial expansion, since the refining capacity for 1948 was only 7 million cubic metres, equivalent to 9 per cent of the crude oil production of the country.

Exports from Venezuela have followed the same pattern as production, since only a very small proportion of the output remains in the country for domestic consumption (3.3 per cent in 1952). Due to the volume obtained by export of petroleum and petroleum derivatives (93 million cubic metres in 1951, or just over 15 per cent and 50 per cent of world production and exports [6] respectively), the Venezuelan industry is a substantial factor in the world market.

Venezuelan output, which in 1948 was distributed in the proportion of 43 per cent to the United States and Canada, 20 per cent to Latin America and 34 per cent to Europe, has in the case of Europe, lost ground to petroleum from the Middle East, but has gained in exports to North America, whence nearly half of the 1951 exports were dispatched. Venezuelan production thus appears to be strongly linked with North American demand. With the rise in fuel consumption during the winter in the United States, and the maintenance of the purchasing level or defence purposes during at least the first half of 1953, a relatively steady demand for Venezuelan crude oil is anticipated. This will permit the high production levels of the last few years to be maintained.

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[6] These totals do not include the Union of Soviet Socialist Republics or Eastern Europe.

(c) *Mexico*

Since 1938, the entire petroleum industry of Mexico has been in the hands of a State-controlled enterprise, Petroleos Mexicanos. The main oilfield operated by this company, Poza Rica, which contributes two-thirds of the total Mexican oil output, was worked intensively during 1950 to relieve the pressure on demand. In conjunction with other projects, this development allowed a production rise of about 19 per cent for 1950, the highest figure since the company was established. However, through the necessity for conserving reserves, this rate of extraction had to be reduced substantially; as a result, the increase for 1951 was only 6.6 per cent, a figure more in accord with the available resources and which represented an output of 12.5 million cubic metres.

In 1952, the rate of production for crude oil did not increase. The first six months showed a rise of 4.5 per cent as compared with the same period in 1951, but for the whole year output was only 0.2 per cent more than the total for the previous year. The most serious problem confronting the Mexican petroleum industry during the last few years has been the need to devote the greater part of its financial resources to the development of refineries and transport to deal with the ever-growing domestic consumption. For this reason, Petróleos Mexicanos has not been able to carry out adequate prospecting for new fields and, in order to obtain immediate results, has had to confine its main activities to known fields which, in general, have reached a stage where the rates of utilization have to be reduced. In 1952, it was possible to counteract this tendency to a certain degree and the proportion of exploratory wells was increased; the total of wells drilled also rose more than in 1951. Prospecting resulted in the discovery of a new and rich deposit—the Ezequiel Ordóñez field, a southern extension of the Faja de Oro field—which may relieve the situation to a considerable degree in the years to come.

Mexican domestic consumption from 1946 to 1951 inclusive has grown at an average rate of 9.3 per cent annually; in 1952, it amounted to 10.2 million cubic metres. It is not anticipated that this rate will decline during the next few years in view of the ever-increasing use of liquid fuel in generating electric power, for road and rail transport and for industry. However, production in the older oil fields, in addition to the yields from the new deposits in the north-east of the country, will allow output to rise at the rate of 4 per cent annually. This, together with the anticipated production from the southern extension of the Faja de Oro field, and others of smaller importance, will be sufficient to supply domestic demand for some four years and will maintain the quantities of crude oil for exports at approximately their present levels.

The net exportable surplus of refined products has already been reduced to insignificant proportions. Thus, in view of the anticipated rise in domestic consumption, it will be necessary to increase the use of the present refining capacity, which is nominally almost equal to the production of crude oil. The margin of this capacity, which is not at present utilized, would be sufficient to supply additional refining needs for only two or three years. Already, fresh investments in this sector of the industry are being made.

According to a recent survey,[7] to establish its economic situation on a firm basis, the petroleum industry requires substantially greater investments, above all for exploration. Such investments have averaged the equivalent of some 30 million dollars annually during the years 1946-51. It is estimated that 51 million dollars (440 million pesos), were invested in 1952; this amount, however, is still small in comparison with over-all needs.

Financing has been mainly effected by the use of the operating profits of the company itself, which, since its establishment, has received capital from other sources equivalent to 13 per cent of the total investment. Included in this additional capital is that from private foreign firms of contractors (principally North American) which have carried out prospection using their own capital; this has been done on the basis of contracts with the government providing for payment only in the case of the success of the operations, which would then take the form of a production percentage. From the time this system of contracts was initiated, from 1948 until 1952, the amount of these investments represented a total of not more than 14 million dollars, but may eventually become a factor of some importance. This method is of particular interest as constituting a means of development within a system based strictly on domestic lines, as established by Mexico's political constitution. In spite of the urgent need for capital, which adversely influences the industry, in 1950 government taxes and other subsidies to special consumers reached a total of 33 per cent of the gross income of Petróleos Mexicanos.

(d) *Argentina*

The petroleum situation in Argentina has been unfavourable during the last few years. Production, which at present covers about 40 per cent of consumption, is increasing at a rate of only 4 per cent annually, while from 1946 onwards consumption has been increasing by about 12 per cent a year. Petroleum imports have thus come to represent a considerable drain on foreign exchange. Partly for this reason, and partly because of the difficulties of obtaining petroleum from Iran, contracted from Great Britain under the terms of the 1951 trade agreement, the rationing of fuel consumption during the course of 1952 became necessary.

A greater increase in Argentine production has not been possible since Yacimientos Petrolíferos Fiscales, which produced 78 per cent of the total output in 1952, has not possessed the necessary equipment for undertaking a more extensive programme of exploration. In addition, production of the privately-owned companies has tended to decline. At the beginning of 1952, however, the government organization devoted an extra 40 million dollars to the purchase of equipment for exploration and drilling.

The new five-year plan for 1953-57 foreshadows an investment of 510 million dollars (at the rate of 5 pesos per dollar) for the development of the petroleum industry, in addition to 260 million dollars for natural gas. An output of 6.6 million cubic metres of crude oil in 1957 is expected, as compared with 3.85 million produced in 1952. The bulk of this increase will come from the Durán field, discovered in the province of Salta in 1950, and which at present produces the highest yields. A pipeline 1,120 kilometres long to carry the crude oil to San Lorenzo is to be constructed, and another of 400 kilometres for the Nequén fields is also projected. Annual refining capacity will be expanded by some 2 million cubic metres and the tanker fleet will also be considerably enlarged.

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[7] Joint Commission of the Government of Mexico and the International Bank for Reconstruction and Development, *The Economic Expansion of Mexico and its Capacity to Absorb Foreign Capital*, chapter IV, Mexico, 1952.

A new pipeline for natural gas, of 1,530 kilometres, will be constructed from the Durán field to Buenos Aires and it is thus hoped that, in conjunction with the present Comodoro Rivadavia pipeline, natural gas, equivalent in heating capacity to 1.5 million cubic metres of crude oil, will be available by 1957. The Comodoro Rivadavia pipeline (1,600 kilometres in length) has been in use since 1950, and at present carries a volume of natural gas equivalent to 150,000 cubic metres of petroleum annually.

By means of these projects, as well as through the development of coal output, the plan envisages that by 1957 Argentina will have neared self-sufficiency as far as fuel is concerned.

(e) *Bolivia*

In Bolivia, where there is a State monopoly similar to that of Mexico, the situation has recently been unfavourable. Production for 1951 was only 80 per cent of the maximum achieved in 1949, but the 1952 figures show a slow recovery. In mid-1951, to increase output, the existing legislation was modified, to allow concessions to foreign capital. Simultaneously, discussions were held with possible North American investors, and even with the company whose assets had been expropriated when the government enterprise was formed in 1937. There has been no basic change in this policy since a new government assumed power in April 1952. The industry faces a difficult situation, since greater production in the existing oilfields demands substantial investment. As investment has not been distributed evenly among the various sectors of the industry, a situation has now arisen in which output covers only a third of the consumption, while refining capacity is more than double the consumption requirements.

In November 1952, the government enterprise announced a plan for the reorganization and expansion of the industry. In its first phase (already under way), production of crude oil will be doubled in the course of a year through an investment of 1,850,000 dollars in the principal oilfield. Another 2 million dollars, not yet underwritten, will be invested in the other important oilfield in Bolivia, and will be sufficient to supply the country with the principal types of derivatives and even to allow for an export surplus for the north of Argentina. This project also provides for the drawing up of leases and concessions, the formation of joint-stock companies between private investors and the government-owned company, and the revision of Bolivian petroleum legislation.

(f) *Brazil*

A project of considerable interest is being examined at present in Brazil, whereby the government proposes to invest a sum of about 500 million dollars, spread over five years, in the exploration and utilization of the petroleum wealth of the country. This project would be effected by means of a company in which the government would own 51 per cent of the capital, the remainder being divided among Brazilian private investors and other entities, to the exclusion of all foreign participation. It is the first attempt at exploration on a large scale. Previously, Brazil had not granted options to foreign capital to carry out exploration, while domestic capital has predominantly been devoted to refining projects.

The expansion of local production becomes increasingly urgent, due to the existence of domestic oil-bearing areas and the growth of imports of liquid fuel which amounts to an average of 19.4 per cent annually (1946-51). In 1952, such imports exceeded the value of 227 million dollars, or over 12 per cent of the total value of all imports. A government corporation has been producing some petroleum since 1940, but its present output is not sufficient to cover more than 5 per cent of domestic consumption. This project has, however, permitted the creation of a nucleus of technical experts and research workers, with whom the new plan may be carried out.

According to the project, investments would be distributed approximately as follows: 250 million dollars for exploration and production; 100 million for refining; 50 million for working the bituminous deposits discovered, and 50 million for the tanker fleet. According to government estimates, by 1959 production of some 5.8 million cubic metres of crude oil a year is expected. Refining capacity will be raised to some 10.5 million cubic metres and the tanker fleet will be able to transport about 5.8 million cubic metres. Thus, with the available financial means, it is only intended in this first stage to supply 40 per cent of the probable 1956 consumption, which has been calculated at 14.5 million cubic metres. The state enterprise will not be responsible for distribution, which will remain, as at present, in the hands of foreign-owned companies. As far as investment in the refineries is concerned, it will only be necessary to extend the projects under construction, which at present amount to an annual capacity of 3.5 million cubic metres; in this programme, involving an investment of 100 million dollars, about one-third of the capital is subscribed from private domestic sources. The interest of private investors has encouraged the government in its plan, since it is hoped that an eventual contribution of some 50 million dollars will come from this source. The remainder will be provided from the proceeds of new taxes, among others on the consumption of liquid fuel and general transport.

(g) *Chile*

The Empresa Nacional de Petróleos de Chile (Chilean National Petroleum Corporation) has recently fulfilled its petroleum production programme. Bearing in mind the sales possibilities [8] and the potential capacity of the oilfields, an average production of 10,000 cubic metres a month has been fixed for the moment. This output has been maintained since operations began in October 1949, and by mid-1952 an increase of about 20 per cent was possible.

The corporation's target for the industry envisages a production from the Tierra del Fuego fields of 350,000 cubic metres a year by 1954; the establishment of a small natural gasoline plant and refinery in the same zone, for a total output of 16,500 cubic metres of gasoline a year, and an oil refinery in the central zone with a capacity for the treatment of 1,120,000 cubic metres of crude oil annually. It is thought that this programme will satisfy domestic needs as regards the main oil products,[9] through the refining facilities, and that it will develop production of crude oil as far as possible, beginning with the domestic supply. Up to 1952, this plan has required an investment equivalent to 64.3 million dollars, of which total the government has had to contribute 25.6 million dollars, in foreign exchange. Exports of crude oil have brought in 17.4 million dollars. The natural gasoline plant entered production in May 1952. It is hoped that the petroleum refinery, at present being constructed, will be inaugurated at the beginning of 1954.

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[8] To Uruguay, through a contract with the government refining enterprise of that country, Administración Nacional de Combustibles, Alcohol y Portland (ANCAP).

[9] Excluding the demand of the large copper and nitrate mining companies, which import fuel and diesel oil with their own foreign exchange.

(h) *Colombia*

Up to mid-1951, Colombia had developed its petroleum industry entirely through foreign companies. Upon the expiration of the concession in that year, the principal oilfield passed into the hands of the government, when it was reorganized, to continue operations as a national undertaking. The foreign company which had previously exploited this field co-operated in the reorganization of the project, with a loan of 10 million dollars for the enlargement of the refinery, which was also nationalized. At the end of its first year's operation the new enterprise had proved its worth with a profit appreciably higher than that accruing to the government in the shape of royalties and other sources of revenue from the previous concession. However, production in 1952 was at the same level as that of the average for 1951, and it is anticipated that there will be a gradual decline in the future, since all the better drillings in this field have already been made.

On the other hand, in 1950-51, the Colombian Government adjusted its legislation to provide greater incentives for the investment of foreign capital in exploration. This policy has already led to a renewal of activity in this sector.

(*i*) *Ecuador*

Ecuador is passing through an uneasy phase of production, since, in 1951, output increased by only 3 per cent, while domestic consumption rose by 20 per cent. It is estimated that if these trends continue, Ecuador will cease to be a net exporter of petroleum by the end of five or six years. Facilities for foreign capital, however, which produce practically all the petroleum, have continued to be ample. The reason for the low rate of growth in output must mainly be attributed to a failure to date to find new deposits.

(j) *Peru*

For many years there have been oilfields in Peru, worked by foreign capital. Their actual yield is very low and apparently does not allow for an expansion of production, which is now lower than the output in 1937-39. Domestic consumption now absorbs 47 per cent of production, as opposed to the 20 per cent which this item represented in 1937-39.

Peru for many years had not granted new concessions, but a new petroleum law was introduced in March 1952. This offers greater incentives to foreign investment and at the same time provides new possibilities for prospecting. The new law allows foreign companies to take part in the search for and exploitation of petroleum on equal terms with domestic enterprises. The only obligation imposed upon foreign companies is that of offering, three months before their formal establishment, at least 30 per cent of their stock for sale to Peruvian investors. A tax on rents is substituted for the normal royalty, and this must be calculated in such a way as to divide the net profits equally between the company and the government. In all cases involving export, an advance payment, which is not reimbursable against this tax, is requred; this payment ensures that if the profits are smaller, the State will receive a royalty of at least 20 per cent on the value of the exports. The law also reorganized the Empresa Petrolera Fiscal (National Petroleum Corporation) which is producing a small quantity of crude oil at present, increasing its capital to 500 million soles (33 million dollars); in addition, facilities for private Peruvian investment were granted.

In October 1952, when the registration for concessions was opened for foreign concerns, more than fifteen companies, seeking exploration rights over some 3.5 million hectares, were inscribed. Of these companies, two were Canadian, one Argentine, another jointly Argentine and United States, and five more were from the United States. The remainder were composed of Peruvian undertakings. Amongst these companies seeking new fields was the foreign company which at present produces the highest proportion of the Peruvian output.

(k) *Other countries*

The other Latin-American countries continued to show interest in exploring petroleum possibilities. The Government of Cuba recently adopted measures to encourage prospecting and devoted one million dollars to the purchase of drilling equipment which it plans to rent to private interests who wish to begin exploratory work. The present output of crude oil—about 15,000 cubic metres per year—is insignificant in relation to Cuba's demand, which amounts to some 3 million cubic metres annually. Moreover, output has recently begun to decline, since no new deposits have been found in the three fields at present being exploited. Only two companies, with United States and Venezuelan capital respectively, are undertaking exploratory work of any significance. The North American undertaking, which owns a small refinery with an annual capacity of 300,000 cubic metres (the only one in the country), has announced that it is considering plant enlargements to raise capacity to 1,120,000 cubic metres through investment of 17 million dollars.

In 1951, Costa Rica granted a concession on 1.2 million hectares in two of its provinces to a United States concern.

In 1950, due to changes in government oil policy, three foreign companies, undertaking exploratory work in Guatemala, withdrew from the country. At the beginning of 1952, in accordance with present legislation, it was announced that Guatemala would once again be available to foreign capital for research into its petroleum wealth.